

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 5-20-2004  
 Art Unit: 1752 Phone Number: 301-21333 Serial Number: 10/668,348  
 Mail Box and Bldg/Room Location: 9D60 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

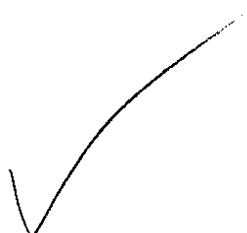
\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photosensitive Composition and Acid Generator  
 Inventors (please provide full names): Kodama, Kunihiro

Earliest Priority Filing Date: 9-24-03

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

— Please search for a compound of the formula (I) in attached claim 1.



## STAFF USE ONLY

Searcher: ed  
 Searcher Phone #: \_\_\_\_\_  
 Searcher Location: \_\_\_\_\_  
 Date Searcher Picked Up: \_\_\_\_\_  
 Date Completed: 5-23-04  
 Searcher Prep & Review Time: 5  
 Clerical Prep Time: \_\_\_\_\_  
 Online Time: 75

## Type of Search

NA Sequence (#) \_\_\_\_\_ STN \_\_\_\_\_  
 AA Sequence (#) \_\_\_\_\_  
 Structure (#) (7) (substructure)  
 Bibliographic (and) Dr.Link \_\_\_\_\_  
 Litigation P Lexis/Nexis \_\_\_\_\_  
 Fulltext \_\_\_\_\_ Sequence Systems \_\_\_\_\_  
 Patent Family \_\_\_\_\_ WWW/Internet \_\_\_\_\_  
 Other \_\_\_\_\_ Other (specify) \_\_\_\_\_

## Vendors and cost where applicable

\$ 359.89

=> file reg

FILE 'REGISTRY' ENTERED AT 15:25:46 ON 23 MAY 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> display history full ll-

L1 FILE 'LREGISTRY' ENTERED AT 14:47:29 ON 23 MAY 2004  
STR

L2 FILE 'REGISTRY' ENTERED AT 14:52:27 ON 23 MAY 2004  
3 SEA SSS SAM L1

L3 FILE 'LREGISTRY' ENTERED AT 14:55:12 ON 23 MAY 2004  
STR L1

L4 FILE 'REGISTRY' ENTERED AT 15:08:29 ON 23 MAY 2004  
L5 0 SEA SSS SAM L3  
L6 STR  
L7 SCR 2040  
L8 50 SEA SSS SAM L5 AND L6  
L9 SCR 1151 OR 1139  
L10 50 SEA SSS SAM L5 AND L6 AND L8  
4891 SEA SSS FUL L5 AND L6 AND L8  
SAV L10 LEE348/A  
L11 14 SEA SUB=L10 SSS SAM L3  
L12 248 SEA SUB=L10 SSS FUL L3  
SAV L12 LEE348A/A

L13 FILE 'LCA' ENTERED AT 15:16:28 ON 23 MAY 2004  
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CREAT? OR FORM## OR FORMING# OR FORMAT? OR MAKE# OR  
MADE# OR MAKING# OR FABRICAT? OR SYNTHESI? OR PREPAR? OR  
PREP#)/BI,AB

L14 FILE 'HCA' ENTERED AT 15:17:37 ON 23 MAY 2004  
13305 SEA PAG OR PAGES OR P(W)A(W)G OR PHOTOACID? OR PHOTOGENERA  
? OR PHOTO(2A) (ACID# OR GENERA?)  
L15 721109 SEA L13(2A)ACID#  
L16 88411 SEA ((PHOTO OR LIGHT OR PHOTOLY?) (2A) (RX# OR RXN# OR  
REACT? OR SENSITI? OR POLYM? OR CURE# OR CURING# OR  
CURAB? OR CROSSLINK? OR CROSS(W)LINK? OR CAT# OR  
CATALY?))/BI,AB  
L17 98442 SEA ((ULTRAVIOLET? OR ULTRA(W)VIOLET? OR UV# OR SUV OR  
LUV OR RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS?

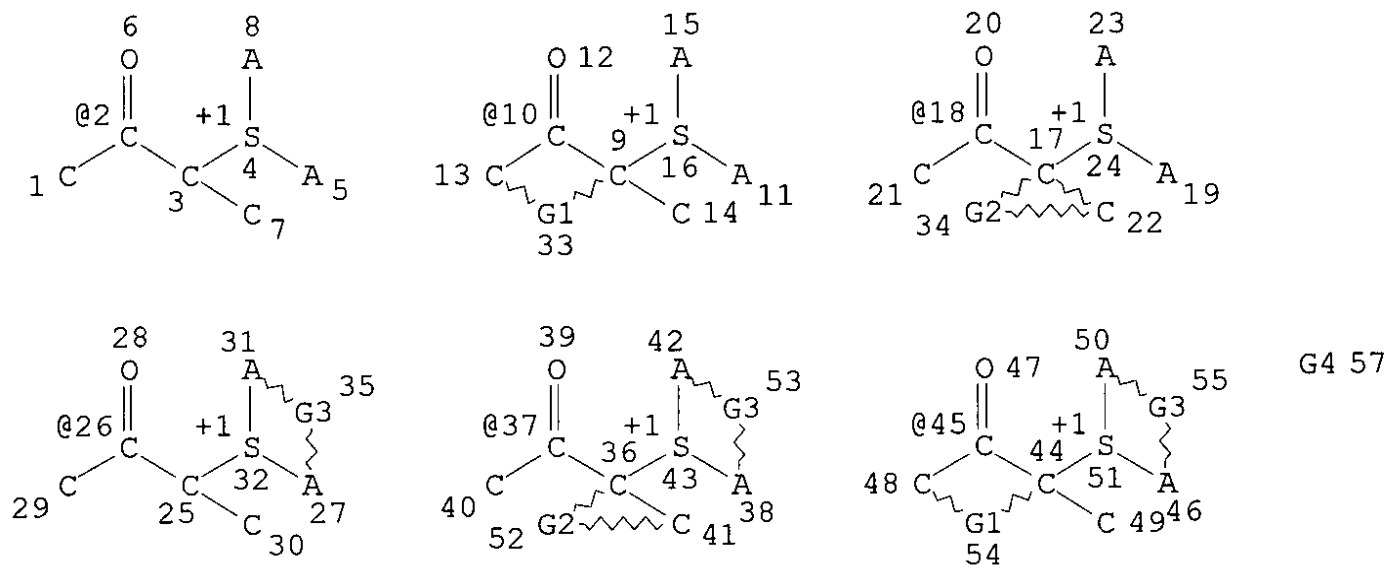
OR LASER?) (2A) (RX# OR RXN# OR REACT? OR REACT? OR POLYM?  
OR CURE# OR CURING# OR CURAB? OR CAT# OR CATALY? OR  
CROSS(W)LINK? OR CROSSLINK?)) /BI,AB  
L18 157516 SEA (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM  
? OR PHOTOCUR? OR PHOTOHARDEN? OR PHOTOCROSS? OR  
PHOTOCAT?) /BI,AB

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L19 15216 SEA (MIX? OR BLEND? OR ADMIX? OR COMMIX? OR IMMIX? OR  
INTERMIX? OR DOPE# OR DOPING# OR DOPANT? OR IMPREGNAT?  
OR COMPOSIT? OR COMPN# OR COMPSN# OR FORMULAT? OR  
COMBINAT? OR INTERSPER? OR AMALGAM?) /BI,AB

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L21 102 SEA L12  
L22 5 SEA L21 AND L14  
L23 11 SEA L21 AND L15  
L24 4 SEA L21 AND L20  
L25 11 SEA L21 AND (L16 OR L17 OR L18)  
L26 148442 SEA RESIST OR RESISTS OR PHOTORESIST? OR MASK? OR  
PHOTOMASK?  
L27 8 SEA L21 AND L26  
L28 20 SEA L22 OR L23 OR L24 OR L25 OR L27  
L29 82 SEA L21 NOT L28  
L30 82 SEA L29 AND (1907-2003/PY OR 1907-2003/PRY)  
L31 81 SEA L29 AND (1907-2002/PY OR 1907-2002/PRY)  
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=> d l12 que stat  
L3 STR



REP G1=(0-3) C  
 REP G2=(1-4) C  
 REP G3=(0-3) A  
 VAR G4=2/10/18/26/37/45  
 NODE ATTRIBUTES:  
 CHARGE IS E+1 AT 4  
 CHARGE IS E+1 AT 16  
 CHARGE IS E+1 AT 24  
 CHARGE IS E+1 AT 32  
 CHARGE IS E+1 AT 43  
 CHARGE IS E+1 AT 51  
 NSPEC IS RC AT 5  
 NSPEC IS RC AT 8  
 NSPEC IS RC AT 11  
 NSPEC IS RC AT 15  
 NSPEC IS RC AT 19  
 NSPEC IS RC AT 23  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 56

STEREO ATTRIBUTES: NONE  
 L5 STR

1 S +1

## NODE ATTRIBUTES:

CHARGE IS E+1 AT 1  
NSPEC IS RC AT 1  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 1

## STEREO ATTRIBUTES: NONE

L6 SCR 2040  
L8 SCR 1151 OR 1139  
L10 4891 SEA FILE=REGISTRY SSS FUL L5 AND L6 AND L8  
L12 248 SEA FILE=REGISTRY SUB=L10 SSS FUL L3

100.0% PROCESSED 4891 ITERATIONS

248 ANSWERS

SEARCH TIME: 00.00.01

=&gt; file hca

FILE 'HCA' ENTERED AT 15:26:03 ON 23 MAY 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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=&gt; d 128 1-20 cbib abs hitstr hitind

L28 ANSWER 1 OF 20 HCA COPYRIGHT 2004 ACS on STN

140:329525 **Photosensitive composition and****acid generator.** Kodama, Kunihiro (Fuji Photo Film

Co., Ltd., Japan). Eur. Pat. Appl. EP 1406122 A2 20040407, 83 pp.

DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,

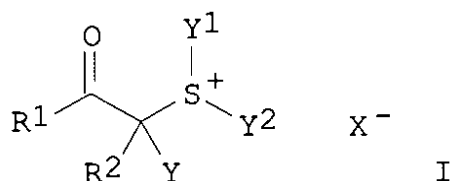
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,

EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-21631

20030925. PRIORITY: JP 2002-279273 20020925.

GI

*applicant.*



AB A **photosensitive compn.** comprises an **acid generator** of the formula I (R1 = alkyl; R2 = H, alkyl, aryl; Y = alkyl; Y1, Y2 = alkyl, aryl, aralkyl, hetero atom-contg. arom.; R1 and R2 may be bonded to each other to form a ring; R2 and Y may be bonded to each other to form a ring; Y1 and Y2 may be bonded to each other to form a ring; two or more structures of the general formula I may be bonded to each other at any position of R1, R2 or Y, or Y1 or Y2 via a connecting group; X = non-nucleophilic anion)., an alk. developer-sol. resin, an acid crosslinking agent, a basic compd., and a surfactant. The object of the present invention is to provide an **acid generator** that has a high transparency against rays of not longer than 220 nm, has an enhanced photodegrdn. ability as compared with conventionally known **acid generators**, thereby revealing high sensitivity, and providing a good **resist** profile. The **photosensitive compn** of the present invention has excellent sensitivity and pattern profile.

IT 677351-28-9P  
(acid generator; photosensitive compn. and acid generator)

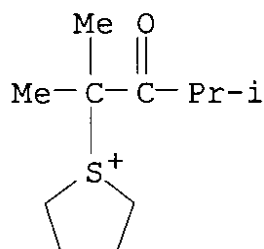
RN 677351-28-9 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

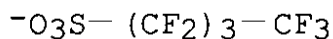
CMF C11 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



IT 677351-29-0 677351-30-3 677351-31-4  
 677351-32-5 677351-34-7 677351-36-9  
 677351-37-0 677351-39-2 677351-41-6  
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 677351-54-1 677351-56-3 677351-57-4  
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 677351-64-3

(acid generator; photosensitive  
 compn. and acid generator)

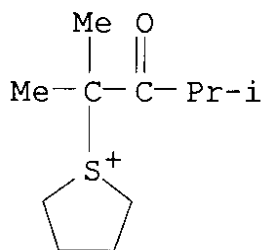
RN 677351-29-0 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with  
 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic  
 acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

CMF C11 H21 O S



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S



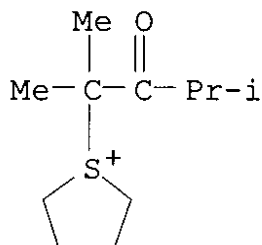
RN 677351-30-3 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

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CRN 677351-27-8

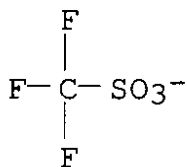
CMF C11 H21 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



RN 677351-31-4 HCA

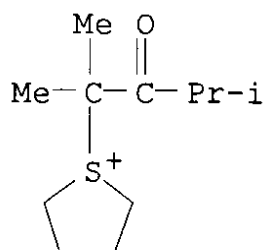
CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(nonafluorobutyl)sulfonyl]-1-butanefluoramide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

CMF C11 H21 O S

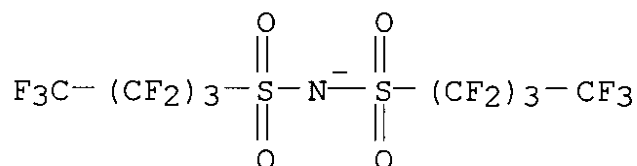




CM 2

CRN 191101-38-9

CMF C8 F18 N O4 S2



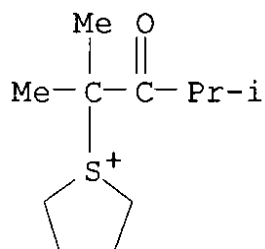
RN 677351-32-5 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with tris[(trifluoromethyl)sulfonyl]methane (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

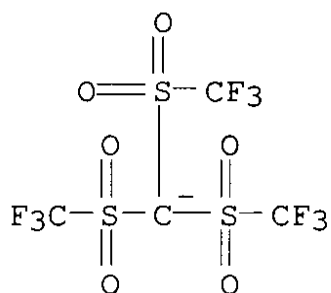
CMF C11 H21 O S



CM 2

CRN 130447-45-9

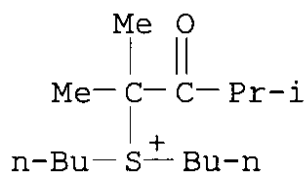
CMF C4 F9 O6 S3



RN 677351-34-7 HCA  
 CN Sulfonium, dibutyl(1,1,3-trimethyl-2-oxobutyl)-, salt with  
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 INDEX NAME)

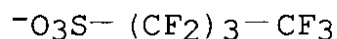
CM 1

CRN 677351-33-6  
 CMF C15 H31 O S



CM 2

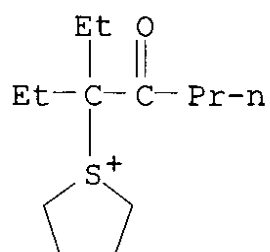
CRN 45187-15-3  
 CMF C4 F9 O3 S



RN 677351-36-9 HCA  
 CN Thiophenium, 1-(1,1-diethyl-2-oxopentyl)tetrahydro-, salt with  
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA  
 INDEX NAME)

CM 1

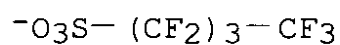
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 CMF C13 H25 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



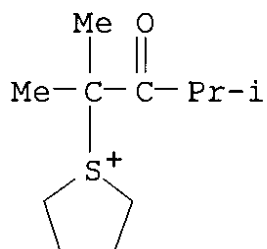
RN 677351-37-0 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with pentafluorobenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

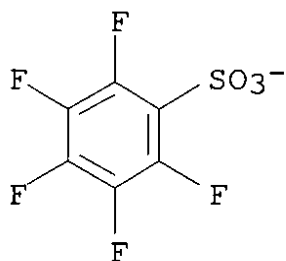
CMF C11 H21 O S



CM 2

CRN 46377-88-2

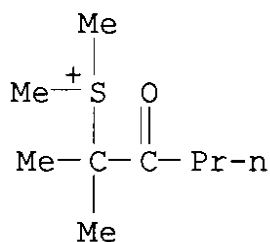
CMF C6 F5 O3 S



RN 677351-39-2 HCA  
 CN Sulfonium, (1,1-dimethyl-2-oxopentyl)dimethyl-, salt with  
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 INDEX NAME)

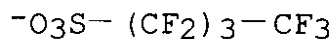
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CRN 677351-38-1  
 CMF C9 H19 O S



CM 2

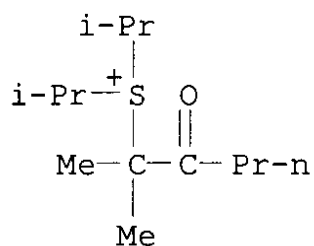
CRN 45187-15-3  
 CMF C4 F9 O3 S



RN 677351-41-6 HCA  
 CN Sulfonium, (1,1-dimethyl-2-oxopentyl)bis(1-methylethyl)-, salt with  
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 INDEX NAME)

CM 1

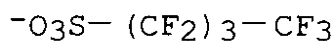
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



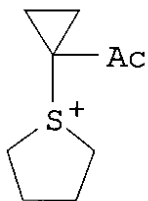
RN 677351-43-8 HCA

CN Thiophenium, 1-(1-acetylcyclopropyl)tetrahydro-, salt with  
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 INDEX NAME)

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CRN 677351-42-7

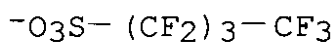
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-45-0 HCA

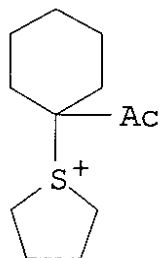
CN Thiophenium, 1-(1-acetylcyclohexyl)tetrahydro-, salt with

1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-44-9

CMF C12 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

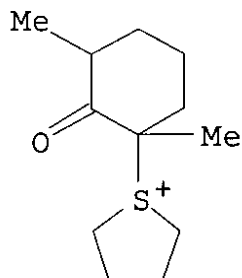
RN 677351-47-2 HCA

CN Thiophenium, 1-(1,3-dimethyl-2-oxocyclohexyl)tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

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CRN 677351-46-1

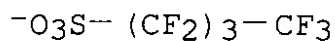
CMF C12 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



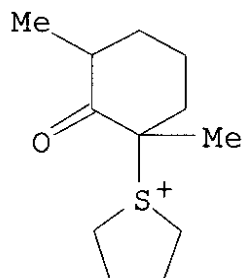
RN 677351-48-3 HCA

CN Thiophenium, 1-(1,3-dimethyl-2-oxocyclohexyl)tetrahydro-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-46-1

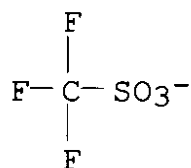
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CM 2

CRN 37181-39-8

CMF C F3 O3 S



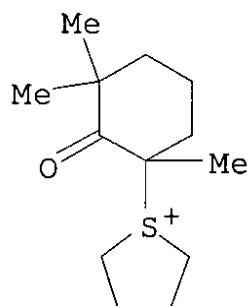
RN 677351-50-7 HCA

CN Thiophenium, tetrahydro-1-(1,3,3-trimethyl-2-oxocyclohexyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butananesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-49-4

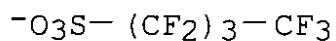
CMF C13 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



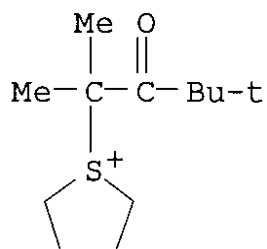
RN 677351-52-9 HCA

CN Thiophenium, tetrahydro-1-(1,1,3,3-tetramethyl-2-oxobutyl)-, salt  
with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 677351-51-8

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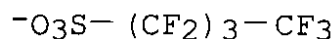


CM 2

CRN 45187-15-3

CMF C4 F9 O3 S





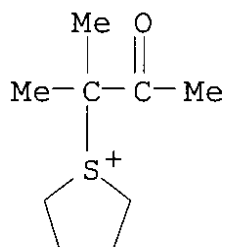
RN 677351-54-1 HCA

CN Thiophenium, 1-(1,1-dimethyl-2-oxopropyl)tetrahydro-, salt with  
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA  
INDEX NAME)

CM 1

CRN 677351-53-0

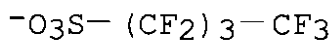
CMF C9 H17 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



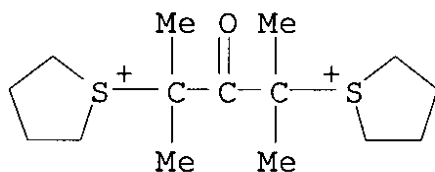
RN 677351-56-3 HCA

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 677351-55-2

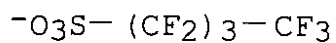
CMF C15 H28 O S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



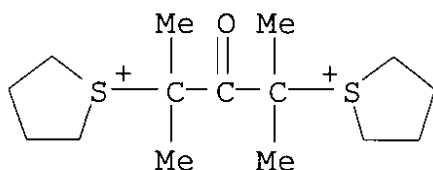
RN 677351-57-4 HCA

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 677351-55-2

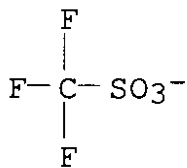
CMF C15 H28 O S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



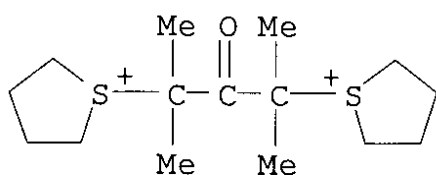
RN 677351-58-5 HCA

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 677351-55-2

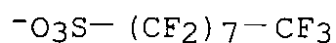
CMF C15 H28 O S2



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S



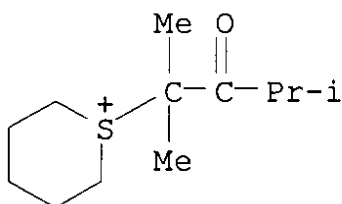
RN 677351-60-9 HCA

CN 2H-Thiopyranium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt  
with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 677351-59-6

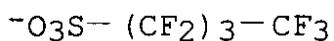
CMF C12 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

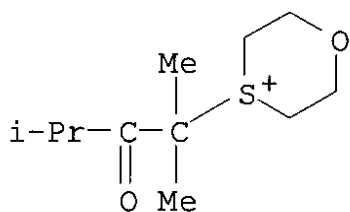


RN 677351-62-1 HCA

CN 1,4-Oxathianium, 4-(1,1,3-trimethyl-2-oxobutyl)-, salt with  
3,5-bis(trifluoromethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX  
NAME)

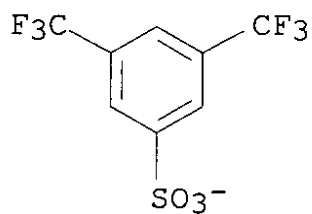
CM 1

CRN 677351-61-0  
 CMF C11 H21 O2 S



CM 2

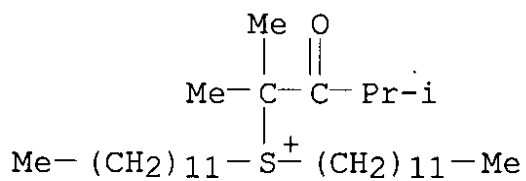
CRN 213740-84-2  
 CMF C8 H3 F6 O3 S



RN 677351-64-3 HCA  
 CN INDEX NAME NOT YET ASSIGNED

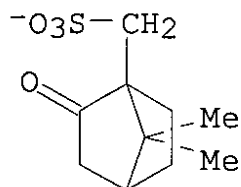
CM 1

CRN 677351-63-2  
 CMF C31 H63 O S



CM 2

CRN 55077-28-6  
 CMF C10 H15 O4 S



IC ICM G03F007-004  
ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photosensitive compn acid generator photoresist photolithog**

IT Polysiloxanes, uses  
(KP-341, Troysol S-366; **photosensitive compn. and acid generator**)

IT Photolithography  
**Photoresists**  
(**photosensitive compn. and acid generator**)

IT 677351-28-9P  
(**acid generator; photosensitive compn. and acid generator**)

IT 66003-78-9 133710-62-0 135133-12-9 138529-81-4 144317-44-2  
177034-80-9 220475-58-1 227199-92-0 241806-75-7 258341-98-9  
258872-05-8 261917-44-6 284474-28-8 301153-77-5 301664-71-1  
301664-72-2 347193-28-6 365971-84-2 389859-76-1 391232-40-9  
398141-18-9 470482-89-4 474510-73-1 610301-07-0  
677351-29-0 677351-30-3 677351-31-4  
677351-32-5 677351-34-7 677351-36-9  
677351-37-0 677351-39-2 677351-41-6  
677351-43-8 677351-45-0 677351-47-2  
677351-48-3 677351-50-7 677351-52-9  
677351-54-1 677351-56-3 677351-57-4  
677351-58-5 677351-60-9 677351-62-1  
677351-64-3 677351-65-4 677351-66-5  
(**acid generator; photosensitive compn. and acid generator**)

IT 141-07-1 3089-11-0 4356-60-9 161679-94-3 162846-57-3  
162846-59-5 185502-14-1  
(**crosslinking agent; photosensitive compn. and acid generator**)

IT 143336-94-1P 250378-10-0P 289623-64-9P 312620-54-5P  
359635-35-1P 370102-83-3P 370866-39-0P 391232-36-3P  
391613-77-7P 398140-38-0P 398140-43-7P 398140-45-9P  
398140-57-3P 398140-59-5P 398140-68-6P 398140-69-7P

|              |              |              |              |
|--------------|--------------|--------------|--------------|
| 398140-77-7P | 398140-80-2P | 405509-19-5P | 406702-00-9P |
| 430437-18-6P | 459418-30-5P | 460754-13-6P | 482609-97-2P |
| 508210-04-6P | 515876-73-0P | 521303-15-1P | 521303-16-2P |
| 607710-65-6P | 607710-66-7P | 607710-67-8P | 607710-68-9P |
| 607710-69-0P | 607710-70-3P | 607710-71-4P | 607710-72-5P |
| 607710-73-6P | 607710-77-0P | 610300-97-5P | 610300-98-6P |
| 610301-00-3P | 610301-01-4P | 610301-03-6P | 610301-04-7P |
| 610301-05-8P | 615278-35-8P | 654076-36-5P | 676515-93-8P |
| 677351-18-7P | 677351-19-8P | 677351-20-1P | 677351-22-3P |
| 677351-24-5P |              |              |              |

(photosensitive compn. and acid  
generator)

IT 24979-69-9 24979-70-2 129674-22-2 137462-24-9, Megafac F176  
158593-28-3 177034-75-2 185405-14-5 200808-68-0 216679-67-3,  
Megafac R08 321164-59-4 325143-38-2 345212-27-3 372968-15-5  
610301-50-3 677351-26-7

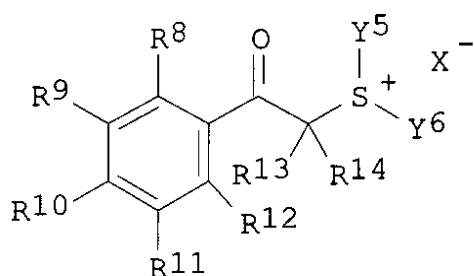
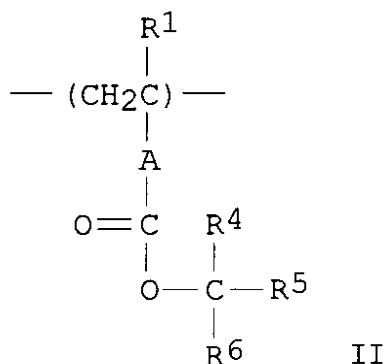
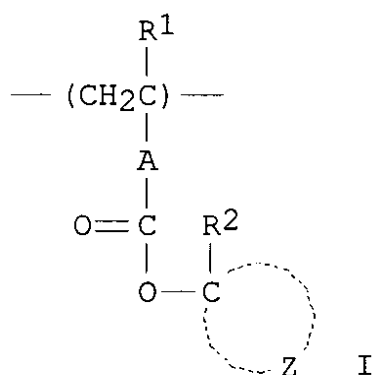
(photosensitive compn. and acid  
generator)

IT 29420-49-3, Potassium nonafluorobutanesulfonate 55339-64-5  
(prepn. of photoacid generator)

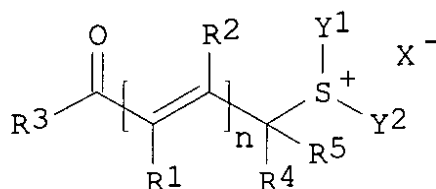
L28 ANSWER 2 OF 20 HCA COPYRIGHT 2004 ACS on STN

140:311995 Positive **resist** composition and pattern formation  
method. Nishiyama, Fumiyuki; Sato, Kenichiro; Kodama, Kunihiro  
(Fuji Photo Film Co., Ltd., Japan). U.S. Pat. Appl. Publ. US  
2004063827 A1 20040401, 56 pp. (English). CODEN: USXXCO.  
APPLICATION: US 2003-669603 (20030925) PRIORITY: JP 2002-287252  
20020930; JP 2002-287393 20020930.

GI



III



IV

AB A pos. **resist** compn. comprising: (A) a resin having alicyclic hydrocarbon groups in side chains, contg. repeating units of general formulas I and II (R1 = H, alkyl; A = linkage group, R2 = C1-4-alkyl; Z = group forming an alicyclic hydrocarbon group together with the carbon atom; R4-R6 = hydrocarbon group, alicyclic hydrocarbon) which increases the soly. in an alkali developing soln. by the action of an acid; and (B) a particular sulfonium compd. having a general structures of formulas III and IV (R1-R3 = H, alkyl, alkenyl, aryl, alkoxy; R4, R5 = H, cyano, alkyl, aryl, alkoxy; Y1, Y2 = alkyl, aryl, aralkyl, heteroatom-contg. arom. group; n = 1-4; R8-R12 = H, nitro, halogen, alkyl, alkoxy, alkyloxycarbonyl, aryl, acylamino, with the proviso that at least two of R8-R12 may be bonded with each other to form a ring; R13 = H, cyano, alkyl, aryl; R14 = alkyl, aryl; Y5, Y6 = alkyl, aryl, aralkyl, heteroatom-contg. arom. group, Y5 and Y6 may be bonded with each other to form a ring; X- = non-nucleophilic anion) which is capable of **generating** an **acid** upon irradsn. with an actinic ray or radiation. The object of the present invention is to provide a pos. **resist** compn. that is used suitably in micro-photofabrication utilizing far UV light, notably ArF excimer laser beam, and offers excellent line edge roughness performance and excellent pattern collapse performance.

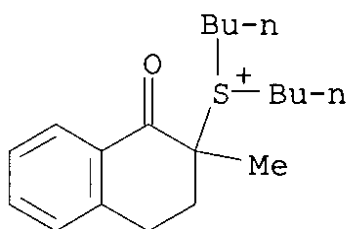
IT 610301-28-5

(photoacid generator; pos. resist compn. and

pattern formation method)  
 RN 610301-28-5 HCA  
 CN Sulfonium, dibutyl(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-  
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)  
 (9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4  
 CMF C19 H29 O S



CM 2

CRN 45187-15-3  
 CMF C4 F9 O3 S

$^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

IC ICM C08K005-41  
 NCL 524155000  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST pos **resist** compn photolithog UV pattern formation method  
 IT Polysiloxanes, uses  
 (KP-341, Troysol S-366; pos. **resist** compn. and pattern  
 formation method)  
 IT Photolithography  
 (UV; pos. **resist** compn. and pattern formation method)  
 IT Positive **photoresists**  
 (pos. **resist** compn. and pattern formation method)  
 IT 470482-89-4 524959-11-3 524959-16-8 524959-18-0 524959-28-2  
 610301-07-0 610301-08-1 610301-09-2 610301-13-8 610301-16-1  
 610301-21-8 **610301-28-5** 610301-34-3 676502-09-3  
 676502-10-6 676502-11-7 676502-13-9 676502-14-0 676502-16-2  
 676502-18-4 676502-20-8 676502-22-0 676502-24-2 676502-25-3  
 676502-26-4 676502-27-5 676502-29-7



(photoacid generator; pos. **resist** compn. and pattern formation method)

IT 479081-07-7P 479081-08-8P 479081-10-2P 479081-11-3P  
 479081-12-4P 479081-13-5P 479081-14-6P 479081-15-7P  
 479081-18-0P 479081-19-1P 479081-21-5P 479081-22-6P  
 479081-24-8P 676502-04-8P 676502-05-9P 676502-07-1P  
 676502-08-2P 676522-31-9P

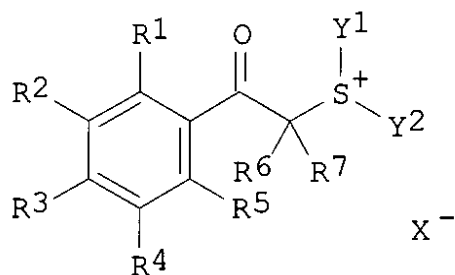
(pos. **resist** compn. and pattern formation method)

IT 60-80-0, Antipyrine 102-82-9, Tri-n-butylamine 3001-72-7,  
 1,5-Diazabicyclo[4.3.0]-5-nonene 9016-45-9, Polyoxyethylene nonyl  
 phenyl ether 24544-04-5, 2,6-Diisopropylaniline 36631-19-3,  
 Triphenylimidazole 41556-26-7, Bis(1,2,2,6,6,-penta  
 methyl-4-piperidyl)sebacate 137462-24-9, Megafac F176  
 216679-67-3, Megafac R08

(pos. **resist** compn. and pattern formation method)

L28 ANSWER 3 OF 20 HCA COPYRIGHT 2004 ACS on STN  
 140:207460 Soft x-ray sensitive **resist** resin composition for  
 semiconductor device fabrication. Uenishi, Kazuya; Kodama,  
 Kunihiro; Fujimori, Toru (Fuji Photo Film Co., Ltd., Japan). Jpn.  
 Kokai Tokkyo Koho JP 2004053934 A2 20040219, 43 pp. (Japanese).  
 CODEN: JKXXAF. APPLICATION: JP 2002-211384 20020719.

GI



AB The title compn. contains an alkali-solubilizable resin by reacting with an acid and a **light-** or radiation-sensitive **acid generator**, wherein the resin has functional group -O-C(R1a)(R2a)-O-W-O-R3a ( R1a-2a = H, C1-4 alkyl; W = 2-valent org. group; R3a = C11-20 alkyl, C11-30 aryl, C12-30 aralkyl) and wherein the **acid generator** has general structure I ( R1-5 = H, nitro, halo, alkyl, etc.; R6 = H, cyano, alkyl, aryl; R7 = alkyl, aryl; Y1-2 = alkyl, aryl, aralkyl, etc.; X- = non-nucleophilic anion). The compn. shows good sensitivity and provides **photoresist** of high resoln., good pattern profile, LER properties, and high dry etching-resistance.

IT 610301-28-5 610301-30-9

(acid generator; soft x-ray sensitive  
resist resin compn.)

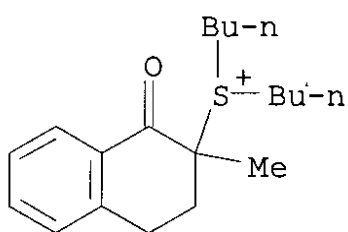
RN 610301-28-5 HCA

CN Sulfonium, dibutyl(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-  
, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)  
(9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4

CMF C19 H29 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

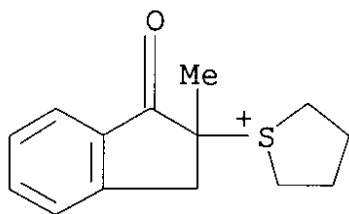
RN 610301-30-9 HCA

CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-inden-2-yl)tetrahydro-  
, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)  
(9CI) (CA INDEX NAME)

CM 1

CRN 610301-29-6

CMF C14 H17 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $\text{-O}_3\text{S- (CF}_2\text{)}_3\text{-CF}_3$ 

IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 76

ST x ray **resist** resin compn resin **acid**  
**generator**

IT Semiconductor device fabrication  
X-ray **resists**

(soft x-ray sensitive **resist** resin compn. for  
semiconductor device fabrication)

IT 407-25-0, Trifluoroacetic **acid** anhydride 611-70-1,  
Isobutyrophenone 1600-44-8, Tetramethylene sulfoxide 29420-49-3,  
Potassium nonafluorobutanesulfonate

(**acid generator**; soft x-ray sensitive  
**resist** resin compn.)

IT 144317-44-2 398141-18-9 470482-89-4 474510-76-4 610301-07-0  
610301-08-1 610301-09-2 610301-12-7 610301-13-8 610301-16-1  
610301-18-3 610301-19-4 610301-23-0 **610301-28-5**  
**610301-30-9** 661461-23-0 661461-25-2

(**acid generator**; soft x-ray sensitive  
**resist** resin compn.)

IT 110-75-8, 2-Chloroethyl vinyl ether 1131-60-8, p-Cyclohexylphenol  
(resin; soft x-ray sensitive **resist** resin compn.)

IT 24979-78-0DP, p-Acetoxystyrene homopolymer, hydrolyzed  
57650-77-8DP, reaction product with polyhydroxystyrene  
95418-59-0DP, p-tert-Butoxystyrene-styrene copolymer, hydrolyzed  
212555-24-3DP, reaction product with polyhydroxystyrene  
249562-81-0DP, reaction product with polyhydroxystyrene  
249562-82-1DP, reaction product with polyhydroxystyrene  
249562-84-3DP, reaction product with polyhydroxystyrene  
249562-85-4DP, reaction product with polyhydroxystyrene  
249562-86-5DP, reaction product with polyhydroxystyrene  
249562-87-6DP, reaction product with polyhydroxystyrene  
249562-88-7DP, reaction product with polyhydroxystyrene  
(resin; soft x-ray sensitive **resist** resin compn.)

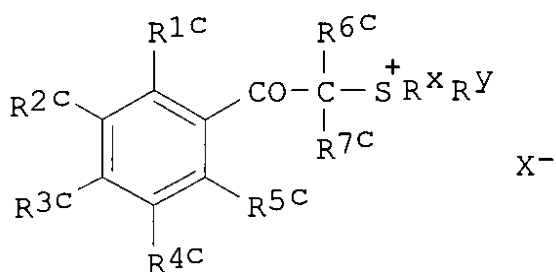
IT 24979-70-2, VP 8000

(resin; soft x-ray sensitive **resist** resin compn.)

L28 ANSWER 4 OF 20 HCA COPYRIGHT 2004 ACS on STN

139:388487 Positive-working **light-sensitive photoresist composition** containing specific **photoacid** generator and specific resin. Sato, Kenichiro; Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003330172 A2 20031119, 70 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-138809 20020514.

GI



AB The title compn. contains a **photoacid** generator and a resin increasing in an alkali developer by reacting with an acid, wherein the **photoacid** generator has general structure I (R1c-5c = H, alkyl, alkoxy, etc.; R6c-7c = H, alkyl, aryl; Rx, Ry = alkyl, 2-oxoalkyl, alkoxycarbonylmethyl, ally, vinyl; X- = sulfonate, carboxylate, sulfonylamide anion) or (R1d) (R2d) (R3d)S+ X- (R1d-3d = alkyl, 2-oxoalkyl; X- = anion) and wherein the resin has repeating unit II (R1-4 = H, cyano, hydrocarbon, etc.; m = 0, 1). The compn. is suitable use with ArF excimer laser and SOG substrates and provides **photoresists** of the good profile.

IT **477327-88-1**  
(pos.-working **light-sensitive photoresist compn.**)

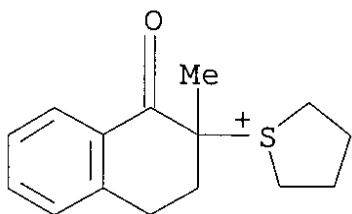
RN 477327-88-1 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 477327-87-0

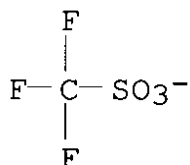
CMF C15 H19 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IC ICM G03F007-004  
ICS C08F034-02; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 35

ST pos laser **photoresist** compn

IT **Light-sensitive** materials  
(**photoacid** generator; pos.-working **light-sensitive photoresist compn.**)

IT **Photoresists**  
(pos.-working **light-sensitive photoresist compn.**)

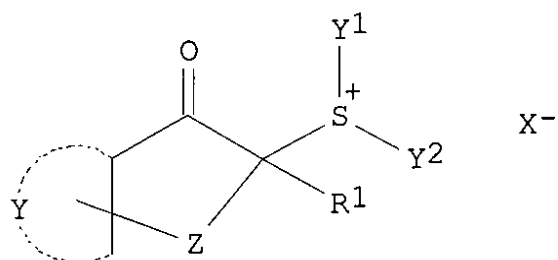
IT 625092-97-9P 625092-98-0P 625092-99-1P 625093-01-8P  
625093-02-9P 625093-04-1P 625093-06-3P  
(pos.-working **light-sensitive photoresist compn.**)

IT 144089-15-6 241806-75-7 258342-00-6 258872-05-8 284474-28-8  
301153-77-5 301664-71-1 454471-07-9 470482-89-4 474510-73-1  
**477327-88-1** 610301-07-0 625093-08-5  
(pos.-working **light-sensitive photoresist compn.**)

L28 ANSWER 5 OF 20 HCA COPYRIGHT 2004 ACS on STN  
139:330330 Chemically amplified **photoresist** compositions with  
high sensitivity and resolution. Kodama, Kunihiro (Fuji Photo Film  
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003302754 A2

20031024, 63 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
 2002-110738 20020412.

GI



AB The **resist** compns., useful for excimer laser development, contain **photoacid** generators I (R1 = H, alkyl, aryl, cyano; Y1, Y2 = alkyl, aryl, aralkyl, heteroring; Y = condensed arom. group, heteroring; Z = single bond, divalent linking group; X- = nonnucleophilic anion).

IT **615278-17-6**  
 (photoacid generator; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)

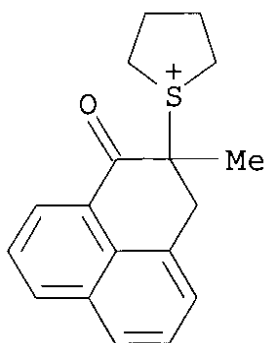
RN 615278-17-6 HCA

CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-phenalen-2-yl)tetrahydro-, salt with 3,5-bis(trifluoromethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 615278-16-5

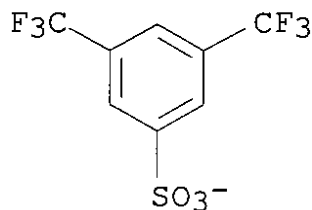
CMF C18 H19 O S



CM 2

CRN 213740-84-2

CMF C8 H3 F6 O3 S



- IC ICM G03F007-004  
ICS G03F007-038; G03F007-039; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** excimer laser sensitivity **photoacid** generator; chem amplification **photoresist** resolu sulfonium **PAG**
- IT Sulfonium compounds  
(arene, **photoacid** generators; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT Aromatic compounds  
(sulfonium, **photoacid** generators; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT **Photoresists**  
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 24979-70-2, p-Hydroxystyrene homopolymer  
(VP 5000, VP 8000; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 141-07-1 3089-11-0 4356-60-9 17464-88-9 161679-94-3  
162846-57-3 162846-59-5 185502-14-1  
(crosslinker; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 615277-73-1 615277-76-4 615277-79-7 615277-81-1 615277-83-3  
615277-86-6 615277-87-7 615277-90-2 615277-92-4 615277-95-7  
615277-98-0 615278-00-7 615278-02-9 615278-05-2 615278-08-5  
615278-11-0 615278-14-3 **615278-17-6** 615278-20-1  
615278-23-4 615278-26-7 615278-29-0 615278-32-5  
(**photoacid** generator; sulfonium-based **photoacid**

- generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)
- IT 615277-70-8P  
(**photoacid** generator; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)
- IT 615277-67-3P  
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)
- IT 109-92-2DP, Ethyl vinyl ether, ethers with hydroxystyrene homopolymer 24979-70-2DP, VP 15000, ethers with Et vinyl ether  
129674-22-2P 143336-94-1P 159296-87-4P 177034-73-0P  
177034-75-2P 199432-82-1P 200808-68-0P 228101-60-8P  
250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288620-13-3P 288620-15-5P 289623-64-9P  
289706-85-0P 312620-54-5P 325143-38-2P 326591-96-2P  
359635-35-1P 366808-82-4P 370102-83-3P 372968-15-5P  
391232-36-3P 391613-77-7P 398140-38-0P 398140-43-7P  
398140-45-9P 398140-59-5P 398140-68-6P 398140-69-7P  
398140-77-7P 398140-80-2P 405509-19-5P 406702-00-9P  
430437-18-6P 459418-30-5P 482609-97-2P 503003-65-4P  
508210-04-6P 515876-73-0P 521303-15-1P 521303-16-2P  
524699-47-6P 574735-94-7P 607710-65-6P 607710-66-7P  
607710-67-8P 607710-68-9P 607710-69-0P 607710-70-3P  
607710-71-4P 607710-72-5P 607710-73-6P 607710-76-9P  
607710-77-0P 610300-92-0P 610300-96-4P 610300-97-5P  
610300-98-6P 610301-00-3P 610301-01-4P 610301-03-6P  
610301-04-7P 610301-05-8P 615278-33-6P 615278-35-8P  
615278-38-1P  
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)
- IT 75-77-4, Chlorotrimethylsilane, reactions 1600-44-8,  
Tetramethylenesulfoxide 54784-07-5  
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)
- IT 24979-69-9, Phenol, 3-ethenyl-, homopolymer 185405-14-5  
321164-59-4 345212-27-3  
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resoln.)

L28 ANSWER 6 OF 20 HCA COPYRIGHT 2004 ACS on STN

139:314532 Radiation sensitive composition and compound. Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1353225 A2 20031015, 99 pp. DESIGNATED STATES: R: AT, BE, CH, DE,



DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-7989 20030410. PRIORITY: JP 2002-108104 20020410; JP 2002-240661 20020821.

AB The present invention relates to a stimulation sensitive compn. used for a semiconductor prodn. process such as IC, a liq. crystal, the prodn. of a circuit substrate such as a thermal head, further, other photo application system, lithog. printing, an acid curing compn., a radical curing compn. and the like. The present invention relates to a stimulation sensitive compn. comprising: (A) a compd. represented by:  $\text{ArC(=O)CR}_6\text{R}_7\text{S}^+\text{Y}_1\text{Y}_2\text{X}^-$  (Ar = aryl or arom. group contg. a hetero atom;  $\text{R}_6$  = H, cyano, alkyl, aryl group;  $\text{R}_7$  = monovalent org. group;  $\text{Y}_{1,2}$  = alkyl, aryl, aralkyl, etc.;  $\text{X}^-$  = non-nucleophilic anion) which is capable of **generating** an **acid** or a radical by stimulation from the external. (B) a resin.

IT 610301-26-3 610301-28-5 610301-30-9  
610301-32-1

(acid generating agent; radiation sensitive  
resist compn. for semiconductor prodn. process contg.)

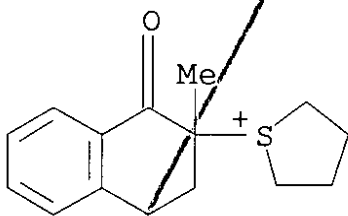
RN 610301-26-3 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 477327-87-0

CMF C15 H19 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^-\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

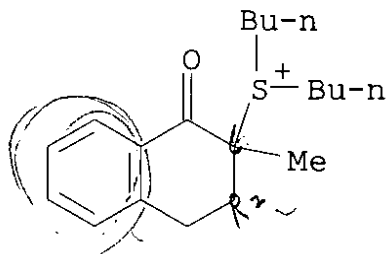
RN 610301-28-5 HCA

CN Sulfonium, dibutyl(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-  
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)  
 (9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4

CMF C19 H29 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

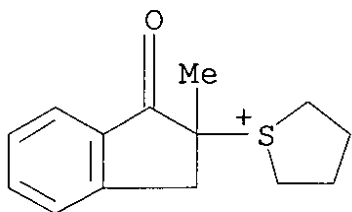
RN 610301-30-9 HCA

CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-inden-2-yl)tetrahydro-  
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)  
 (9CI) (CA INDEX NAME)

CM 1

CRN 610301-29-6

CMF C14 H17 O S



CM 2

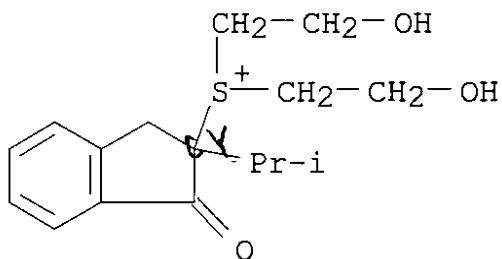
CRN 45187-15-3  
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

RN 610301-32-1 HCA  
CN Sulfonium, [2,3-dihydro-2-(1-methylethyl)-1-oxo-1H-inden-2-yl]bis(2-hydroxyethyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 610301-31-0  
CMF C16 H23 O3 S



CM 2

CRN 45187-15-3  
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

IC ICM G03F007-004  
ICS G03F007-039; G03F007-038; C07C323-22  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
ST lithog printing radiation sensitive **resist** compn  
IT Lithography  
(radiation sensitive **resist** compn. for semiconductor prodn. process)  
IT **Resists**  
(radiation-sensitive; radiation sensitive compn. and compd. for)  
IT 470482-89-4P 610301-07-0P  
(**acid generating** agent; radiation sensitive

**resist** compn. for semiconductor prodn. process contg.)

IT 66003-78-9 133710-62-0 138529-81-4 144317-44-2 193345-23-2  
 197447-16-8 220475-58-1 227199-92-0 241806-75-7 258341-98-9  
 258872-05-8 284474-28-8 301153-77-5 301664-71-1 301664-72-2  
 347193-28-6 389859-76-1 391232-40-9 398141-17-8 398141-18-9  
 398141-19-0 474510-76-4 592544-87-1 610301-08-1 610301-09-2  
 610301-10-5 610301-12-7 610301-13-8 610301-14-9 610301-16-1  
 610301-18-3 610301-19-4 610301-21-8 610301-23-0 610301-25-2  
**610301-26-3 610301-28-5 610301-30-9**  
**610301-32-1** 610301-34-3 610301-36-5 610301-38-7  
 610301-40-1 610301-42-3 610301-44-5 610301-46-7 610301-47-8  
 610301-48-9

(**acid generating** agent; radiation sensitive

**resist** compn. for semiconductor prodn. process contg.)

IT 75-77-4, Chlorotrimethylsilane, **reactions** 513-36-0  
 827-52-1, Phenylcyclohexane 1600-44-8, Tetramethylenesulfoxide  
 2168-93-6, Dibutylsulfoxide 13547-70-1 20907-24-8

(prepn. of **radiation** sensitive **resist**

**compn.** for semiconductor prodn. process)

IT 5195-24-4P 56346-00-0P

(prepn. of radiation sensitive **resist** compn. for  
 semiconductor prodn. process)

IT 24979-69-9P 24979-70-2P, VP-5000 143336-94-1P 185405-14-5P  
 250378-10-0P, Butyrolactone methacrylate-2-Ethyl-2-adamantyl  
 methacrylate copolymer 289623-64-9P 312620-54-5P 321164-59-4P  
 345212-27-3P 359635-35-1P 370102-83-3P 370866-39-0P  
 391232-36-3P 391613-77-7P 398140-43-7P 398140-45-9P  
 398140-57-3P 398140-59-5P 398140-68-6P 398140-69-7P  
 398140-77-7P 405509-19-5P 406702-00-9P 430437-18-6P  
 459418-30-5P 471257-28-0P 482609-97-2P 508210-04-6P  
 515876-73-0P 521303-15-1P 521303-16-2P 524699-47-6P  
 574735-94-7P 607710-65-6P 607710-66-7P 607710-67-8P  
 607710-68-9P 607710-69-0P 607710-70-3P 607710-71-4P  
 607710-72-5P 607710-73-6P 607710-76-9P 607710-77-0P  
 610300-92-0P 610300-93-1P 610300-94-2P 610300-95-3P  
 610300-96-4P 610300-97-5P 610300-98-6P 610301-00-3P  
 610301-01-4P 610301-03-6P 610301-04-7P 610301-05-8P

(radiation sensitive **resist** compn. for semiconductor  
 prodn. process contg.)

IT 129674-22-2 158593-28-3 177034-75-2 200808-68-0 325143-38-2  
 372968-15-5 610301-49-0 610301-50-3

(radiation sensitive **resist** compn. for semiconductor  
 prodn. process contg.)

IT 120-07-0, N-Phenyldiethanolamine 484-47-9, 2,4,5-  
 Triphenylimidazole 621-77-2, Tripentylamine 1116-76-3,  
 Tri-n-octylamine 1672-63-5, 4-Hydroxyantipyrine 2052-49-5,  
 Tetrabutylammonium hydroxide 3001-72-7, 1,5-Diazabicyclo[4,3,0]non-  
 5-ene 3040-44-6, 1-Piperidineethanol 19293-63-1,

Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium acetate  
24544-04-5, 2,6-Diisopropylaniline 70384-51-9  
(radiation sensitive **resist** compn. for semiconductor  
prodn. process contg.)

L28 ANSWER 7 OF 20 HCA COPYRIGHT 2004 ACS on STN

138:9656 Positive **photosensitive composition**.

Kodama, Kunihiro; Sato, Kenichiro; Fujimori, Toru (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1260864 A1 20021127, 145 pp.  
DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR.  
(English). CODEN: EPXXDW. APPLICATION: EP 2002-11516 20020522.  
PRIORITY: JP 2001-152587 20010522; JP 2001-155897 20010524; JP 2001-159060 20010528.

AB A pos. **photosensitive compn.** comprises (A) a specific **acid generator** that **generates** an **acid** upon irradiation of an actinic ray or radiation, and (B) a resin that has a monocyclic or polycyclic alicyclic hydrocarbon structure and is decomposed by the action of an acid to increase solubility in an alkali developing solution.

IT **477327-88-1P**

(**acid generator**; pos **photoresist** compn. contg.)

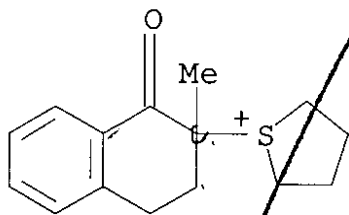
RN 477327-88-1 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 477327-87-0

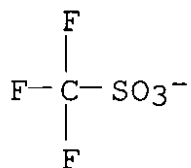
CMF C15 H19 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



- IC ICM G03F007-039  
ICS G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38
- ST pos **photoresist** compn **acid generator** resin
- IT Positive **photoresists**  
(pos. **photosensitive compn.**)
- IT Polysiloxanes, uses  
(surface active agent; pos **photoresist** compn. contg.)
- IT 340986-46-1P 340986-47-2P 454471-15-9P 474276-93-2P  
474510-79-7P 474510-86-6P 474510-92-4P 474510-98-0P  
474511-05-2P 474511-06-3P 477327-74-5P 477327-75-6P  
477327-76-7P 477327-78-9P 477327-80-3P 477327-82-5P  
477327-84-7P 477327-86-9P **477327-88-1P** 477327-90-5P  
477327-91-6P 477327-93-8P 477327-95-0P 477327-97-2P  
477327-98-3P 477328-00-0P 477328-02-2P 477328-04-4P  
477328-06-6P 477328-08-8P 477328-10-2P 477328-11-3P  
477328-12-4P 477328-13-5P 477328-14-6P 477328-15-7P  
477328-16-8P 477328-17-9P 477328-18-0P 477328-19-1P  
477328-20-4P 477328-21-5P 477328-22-6P 477328-23-7P  
477328-24-8P 477328-26-0P 477328-28-2P 477328-30-6P  
477328-31-7P 477328-33-9P 477328-35-1P 477328-36-2P  
477328-37-3P 477328-38-4P 477328-39-5P  
(**acid generator**; pos **photoresist** compn. contg.)
- IT 1116-76-3, Trioctylamine  
(additive; pos **photoresist** compn. contg.)
- IT 60-80-0, Antipyrine 484-47-9, 2,4,5-Triphenylimidazole  
3001-72-7, {1,5-Diazabicyclo[4.3.0]non-5-ene} 3040-44-6,  
1-Piperidineethanol 19293-63-1, Dicyclohexylmethylamine  
19600-49-8, Triphenylsulfonium acetate 24544-04-5,  
2,6-Diisopropylaniline 41556-26-7, Bis1,2,2,6,6-pentamethyl-4-  
piperidyl sebacate 169965-90-6, tert-Butyl lithocholate  
(base compd.; pos **photoresist** compn. contg.)
- IT 398140-50-6P 398140-85-7P  
(pos **photoresist** compn. contg.)
- IT 75-77-4, Chlorotrimethylsilane, reactions 100-68-5, Thioanisole  
1600-44-8, Tetramethylene sulfoxide 29059-07-2, Tetralone

29420-49-3, Potassium nonafluorobutanesulfonate  
(prepn. of acid generator for pos  
photoresist compn.)

|    |              |              |              |              |
|----|--------------|--------------|--------------|--------------|
| IT | 250378-10-0P | 288303-55-9P | 364736-22-1P | 391232-36-3P |
|    | 391613-77-7P | 398140-36-8P | 398140-38-0P | 398140-40-4P |
|    | 398140-43-7P | 398140-45-9P | 398140-47-1P | 398140-48-2P |
|    | 398140-52-8P | 398140-54-0P | 398140-55-1P | 398140-57-3P |
|    | 398140-59-5P | 398140-60-8P | 398140-62-0P | 398140-64-2P |
|    | 398140-65-3P | 398140-68-6P | 398140-69-7P | 398140-71-1P |
|    | 398140-73-3P | 398140-74-4P | 398140-76-6P | 398140-77-7P |
|    | 398140-78-8P | 398140-79-9P | 398140-80-2P | 398140-81-3P |
|    | 398140-82-4P | 398140-84-6P | 398140-86-8P | 398140-87-9P |
|    | 398140-88-0P | 398140-89-1P | 398140-90-4P | 398140-91-5P |
|    | 398140-92-6P | 398140-93-7P | 398140-94-8P | 398140-95-9P |
|    | 398140-97-1P | 398140-98-2P | 398140-99-3P | 398141-00-9P |
|    | 398141-03-2P | 398141-04-3P | 398141-05-4P | 398141-06-5P |
|    | 398141-07-6P | 398141-08-7P | 398141-10-1P | 398141-11-2P |
|    | 398141-13-4P | 398141-14-5P | 398141-16-7P | 398152-52-8P |
|    | 405509-18-4P | 405509-20-8P | 405509-25-3P | 405509-30-0P |
|    | 454470-66-7P | 454470-67-8P | 454470-68-9P | 454470-70-3P |
|    | 454470-71-4P | 454470-72-5P | 454470-73-6P | 454470-74-7P |
|    | 454474-57-8P | 455901-72-1P |              |              |

(resin; pos photoresist compn. contg.)

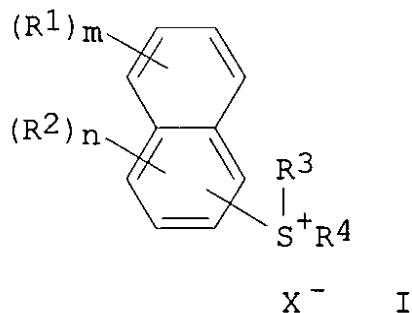
IT 9016-45-9, Polyoxyethylene nonyl phenyl ether 137462-24-9, Megafac  
F 176 216679-67-3, Megafac R 08

(surface active agent; pos photoresist compn. contg.)

L28 ANSWER 8 OF 20 HCA COPYRIGHT 2004 ACS on STN

126:264473 Sulfonium salt compounds, polymerization initiators, curable compositions and curing method. Takahashi, Eiji (Nippon Soda Co., Ltd., Japan; Takahashi, Eiji). PCT Int. Appl. WO 9708141 A1 19970306, 37 pp. DESIGNATED STATES: W: US; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1996-JP2333 19960821. PRIORITY: JP 1995-236140 19950822.

GI



AB Curable compns. contg. compds. I (R1, R2 = alkyl, OH, alkoxy, alkylcarbonyl, arom. carbonyl, arom. thio, halo; R3 = alkyl; R4 = optionally substituted alkyl, alkenyl, cycloalkyl; X = non-nucleophilic anionic residue; m, n = 0-3), cationically polymerizable compds., and optionally sensitizers, is usable appropriately in coatings, adhesives, **photoresists**, etc. Thus, a compn. contg. ERL 4221 (alicyclic epoxy resin) and 2-naphthyl 2-indanyl methylsulfonium hexafluorophosphate showed good storage stability and curability.

IT **188732-08-3P**

(prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)

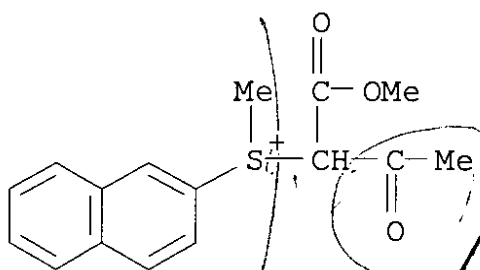
RN 188732-08-3 HCA

CN Sulfonium, [1-(methoxycarbonyl)-2-oxopropyl]methyl-2-naphthalenyl-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 188732-07-2

CMF C16 H17 O3 S



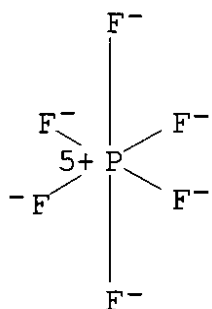
CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS

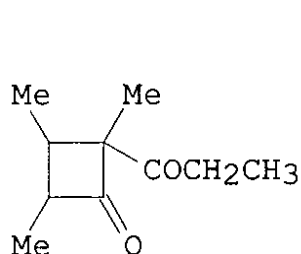




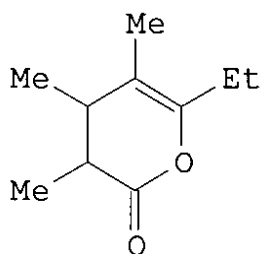
- IC ICM C07C381-12  
ICS C08G059-68; G03F007-031
- CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 25, 37, 67
- ST naphthyl sulfonium compd polymn initiator; epoxy resin curing catalyst sulfonium compd; **UV curable** epoxy resin catalyst; thermal polymn catalyst sulfonium compd; storage stability sulfonium compd catalyst
- IT 26708-04-3, 2-Ethyl-9,10-dimethoxyanthracene 75081-21-9, Isopropylthioxanthone 76293-13-5, 2,4-Dimethylthioxanthone 82799-44-8, 2,4-Diethylthioxanthone  
(photosensitizer; prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)
- IT 188731-58-0P 188731-61-5P 188731-63-7P 188731-65-9P  
188731-67-1P 188731-69-3P 188731-71-7P 188731-73-9P  
188731-75-1P 188731-77-3P 188731-79-5P 188731-80-8P  
188731-82-0P 188731-84-2P 188731-86-4P 188731-88-6P  
188731-90-0P 188731-92-2P 188731-94-4P 188731-96-6P  
188731-98-8P 188732-00-5P 188732-02-7P 188732-04-9P  
188732-06-1P **188732-08-3P** 188732-10-7P  
(prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)
- L28 ANSWER 9 OF 20 HCA COPYRIGHT 2004 ACS on STN  
108:131508 Fluoride anion induced novel reaction  $\alpha$ -(sulfonio) ketone triflate. Ito, Yoshihiko; Nakajo, Eiji; Sho, Katsuhiko; Tamao, Kohei (Dep. Synth. Chem., Kyoto Univ., Kyoto, 606, Japan). Tetrahedron Letters, 28(20), 2247-50 (English) 1987. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 108:131508.

GI

✓



I



II

AB  $\alpha$ -(Phenylmethylsulfonio) ketone triflates are treated with a suspension of KF in aprotic polar solvent to give dimeric 2-acylcyclobutanones, which are rearranged to  $\gamma,\delta$ -unsatd.  $\delta$ -valerolactones by acid catalyst. Thus, treatment of  $\text{MeCH}_2\text{COCHMeS}^+\text{MePh}$  triflate- with KF in MeCN gave acylcyclobutanone I which was isomerized to give 100% lactone II.

IT 113503-27-8P 113503-36-9P

(prepn. and fluoride ion-catalyzed cyclization of)

RN 113503-27-8 HCA

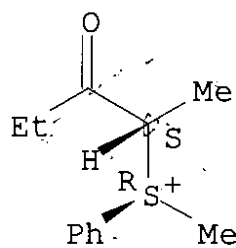
CN Sulfonium, methyl(1-methyl-2-oxobutyl)phenyl-, ( $R^*,S^*$ )-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113503-26-7

CMF C12 H17 O S

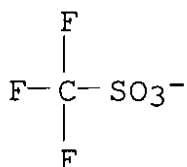
Relative stereochemistry.



CM 2

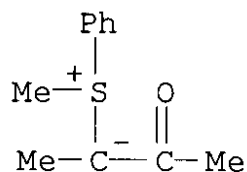
CRN 37181-39-8

CMF C F3 O3 S



RN 113503-36-9 HCA

CN Sulfonium, methylphenyl-, 1-methyl-2-oxopropylide (9CI) (CA INDEX NAME)



IT 113503-13-2P

(prepn. and fluoride iron-catalyzed cyclization of)

RN 113503-13-2 HCA

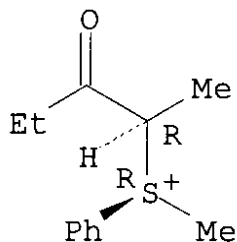
CN Sulfonium, methyl(1-methyl-2-oxobutyl)phenyl-, (R\*,R\*)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113503-12-1

CMF C12 H17 O S

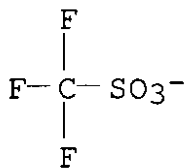
Relative stereochemistry.



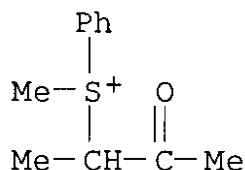
CM 2

CRN 37181-39-8

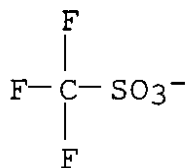
CMF C F3 O3 S



IT 113503-23-4  
 (reaction of, with potassium fluoride)  
 RN 113503-23-4 HCA  
 CN Sulfonium, methyl(1-methyl-2-oxopropyl)phenyl-, salt with  
 trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 113503-22-3  
 CMF C11 H15 O S



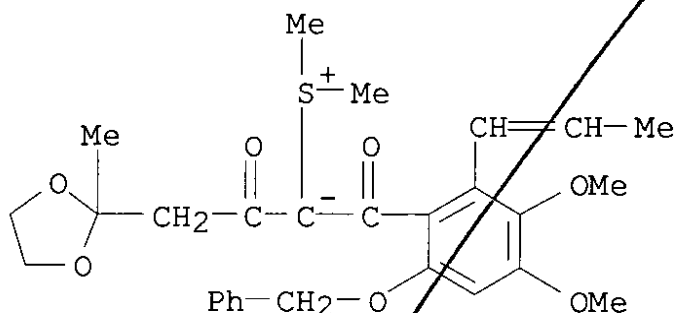
CM 2  
 CRN 37181-39-8  
 CMF C F3 O3 S



CC 27-13 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 23  
 IT 113503-24-5P 113503-25-6P  
 (prepn. and acid-catalyzed rearrangement of)  
 IT 113503-27-8P 113503-33-6P 113503-34-7P 113503-35-8P  
 113503-36-9P  
 (prepn. and fluoride ion-catalyzed cyclization of)  
 IT 113503-13-2P  
 (prepn. and fluoride iron-catalyzed cyclization of)

IT 113503-17-6 113503-19-8 113503-21-2 **113503-23-4**  
(reaction of, with potassium fluoride)

CN Sulfonium, dimethyl-, 1-[3,4-dimethoxy-6-(phenylmethoxy)-2-(1-propenyl)benzoyl]-3-(2-methyl-1,3-dioxolan-2-yl)-2-oxopropylide (9CI) (CA INDEX NAME)



CC 26-6 (Biomolecules and Their Synthetic Analogs)

ST fulvic **acid** total **synthesis**;

phenylmethylenhexanetrione rearrangement; benzoylpyranone prepn cyclization

IT 95730-77-1P

(**prepn.** and methanesulfinic **acid** from)

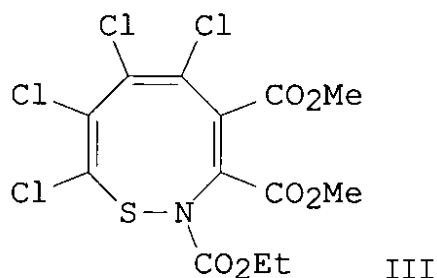
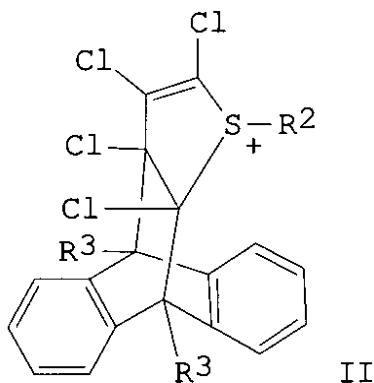
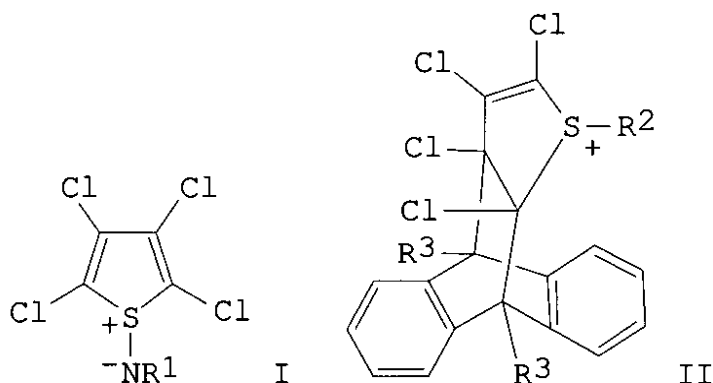
IT 111492-54-7P

(**prepn.** and redn. of)

L28 ANSWER 11 OF 20 HCA COPYRIGHT 2004 ACS on STN

106:67031 Thiophene S,N-ylides: a new versatile class of sulfimides. Meth-Cohn, Otto; Van Vuuren, Gerda (Natl. Chem. Res. Lab., CSIR, Pretoria, 0001, S. Afr.). Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (2), 233-43 (English) 1986. CODEN: JCPRB4. ISSN: 0300-922X. OTHER SOURCES: CASREACT 106:67031.

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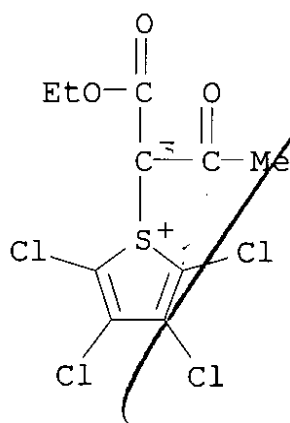
AB Tetrachlorothiophene reacts with  $\text{N}_3\text{CO}_2\text{R}$  ( $\text{R} = \text{Me}, \text{Et}, \text{Ph}$ ) and with 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N<sub>3</sub> at 130-150 ° to give stable thiophene S,N-ylides I ( $\text{R}_1 = \text{CO}_2\text{R}, 4\text{-MeC}_6\text{H}_4\text{SO}_2$ ). 2,5-Dichloro- and 2,5-dibromothiophenes and tetrabromothiophene yield products derived by nitrene attack at the  $\alpha$ -position. The S,N-ylides undergo ready photolysis to liberate the parent nitrene, and react with a wide variety of electron-rich dienophiles as  $4\pi$ -components to give tetrachlorodihydrobenzenes with extrusion of a thionitroso compd. With dienes the ylides react either as  $2\pi$ - or  $4\pi$ -systems. Thus, with anthracene a dihydrothiophene analog II [ $\text{R}_2 = \text{NCO}_2\text{Et}, \text{C}(\text{CO}_2\text{Me})_2$ ;  $\text{R}_3 = \text{H}, \text{Me}$ ] or triptycene is generated, efficiently aromatized and de-ylidated with zinc in methanol. With di-Me acetylenedicarboxylate the ylides yield a thiazocine III by a novel ring expansion. Oxidn. of the ylide system with 3-chloroperbenzoic acid gives the corresponding ylide S-oxide. Tetrachlorothiophene also reacts efficiently with diazoalkanes under rhodium acetate catalysis to give thiophene S,C-ylides, which undergo cycloaddn. with nucleophilic alkenes much more slowly than their nitrogen analogs.

IT **106550-56-5P**

(prepn. of)

RN 106550-56-5 HCA

CN Thiophenium, 2,3,4,5-tetrachloro-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA INDEX NAME)



CC 27-8 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 28

IT 7311-68-4P, 3,5-Dibromothiophene-2-carboxylic acid (prepn. and acyl chlorination of)

IT 634-66-2P 17875-29-5P 72524-27-7P 72524-36-8P 72524-60-8P  
 72541-72-1P 72541-91-4P 90454-53-8P 90454-55-0P 90454-56-1P  
 90454-57-2P 100100-93-4P 105752-81-6P 106550-52-1P  
 106550-53-2P 106550-54-3P **106550-56-5P** 106550-57-6P  
 106550-58-7P 106550-59-8P 106550-61-2P 106550-63-4P  
 106550-64-5P 106550-65-6P 106550-66-7P 106550-67-8P

106550-68-9P 106566-91-0P  
(prepn. of)

L28 ANSWER 12 OF 20 HCA COPYRIGHT 2004 ACS on STN

102:113039 Vicinal polycarbonyl compounds. Koenig, Horst (BASF A.-G. , Fed. Rep. Ger.). Ger. Offen. DE 3313917 A1 19841025, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1983-3313917 19830416.

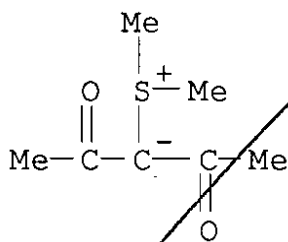
AB RCOCOR1 [R = alkyl, aryl, EtO, (substituted) amino] were prepd. by photochem. oxidn. of 5 ylides. Thus, 5.4 g (PhNHCO)(EtO2C)C:SMe2 and 0.5 g Rose Bengal in 110 mL EtOH were added over 15 min to 400 mL CS2 and 150 mL EtOH at 10° in a **photoreactor** with passage of 50 L O/h to give 8.8 g crude PhNHCOCOCO2Et.

IT 7039-28-3

(photochem. oxidn. of)

RN 7039-28-3 HCA

CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



IC C07C069-738; C07C059-84; C07C049-86; C07C049-12; C07C103-34

CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds) Section cross-reference(s): 23

IT 7039-28-3 14070-66-7 16980-32-8 20912-85-0

95304-39-5 95304-41-9 95304-42-0 95304-44-2 95304-45-3

(photochem. oxidn. of)

L28 ANSWER 13 OF 20 HCA COPYRIGHT 2004 ACS on STN

97:87619 Direct carbon-13 NMR evidence for a tetrahedral intermediate in the binding of a pepstatin analog to porcine pepsin. Rich, Daniel H.; Bernatowicz, Michael S.; Schmidt, Paul G. (Sch. Pharm., Univ. Wisconsin, Madison, WI, 53706, USA). Journal of the American Chemical Society, 104(12), 3535-6 (English) 1982. CODEN: JACSAT. ISSN: 0002-7863.

AB A ketone analog of pepstatin, Iva-Val-Sta-Ala-NH2C5H11 (I), where Sta = (4S)-amino-3-oxo-6-methylheptanoic **acid**, was **synthesized** isotopically enriched at the C-3 position of the Sta residue and its 13C NMR spectra measured in soln. and after binding to porcine pepsin. In soln., the isotopically enriched C-3 is found at 204.2 (CHCl3) ppm. When the ketone is added to 1 equiv of pepsin, the signal shifts to 99.1 ppm. When 1 equiv of pepstatin is added to this soln. to displace the ketone inhibitor from the





(NMR of carbon-13 in)

L28 ANSWER 14 OF 20 HCA COPYRIGHT 2004 ACS on STN

93:7172 Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane. Appleton, David C.; Bull, David C.; McKenna, James; McKenna, Jean M.; Walley, Andrew R. (Chem. Dep., Univ. Sheffield, Sheffield, S3 7HF, UK). Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (2), 385-90 (English) 1980. CODEN: JCPKBH. ISSN: 0300-9580.

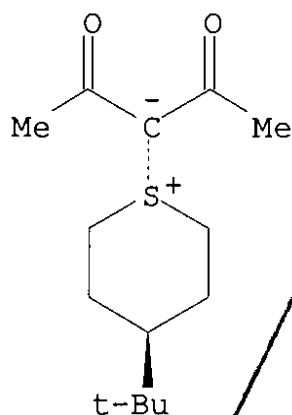
AB **Photogenerated** bis(alkoxycarbonyl)- and diacetylcarbenes add exclusively equatorially to 4-tert-butylthiane and exhibit selectivity in competitive addns. to mixts. of Me<sub>2</sub>S and (Me<sub>2</sub>CH)<sub>2</sub>S. (Ethoxycarbonyl)- and p-toluenesulfonylnitrenes give equal proportions of axial and equatorial adducts with the thiane and show no selectivity in competitive reactions with dialkyl sulfides. The results are largely detd. by kinetic control.

IT **53121-09-8P 73853-58-4P**  
(prepn. of)

RN 53121-09-8 HCA

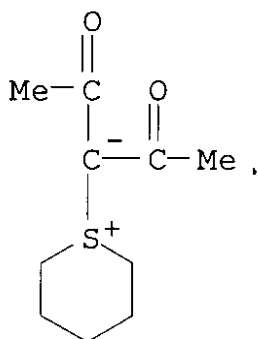
CN 2H-Thiopyranium, 4-(1,1-dimethylethyl)tetrahydro-,  
1-acetyl-2-oxopropylide, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 73853-58-4 HCA

CN 2H-Thiopyranium, tetrahydro-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



CC 22-3 (Physical Organic Chemistry)

IT **53121-09-8P** 53121-10-1P 53121-11-2P 70528-34-6P  
**73853-58-4P** 73853-59-5P 73853-60-8P 73853-61-9P  
 73853-62-0P 73853-63-1P  
 (prepn. of)

L28 ANSWER 15 OF 20 HCA COPYRIGHT 2004 ACS on STN

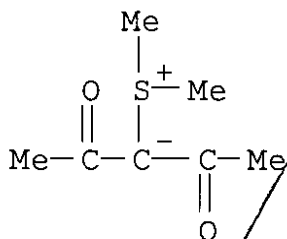
92:163334 **Photosensitized** oxygenation of carbonyl stabilized sulfur and pyridinium ylides and related diazo compounds. Carbon-sulfur and nitrogen bond cleavages. Ando, Wataru; Kohmoto, Shigeo; Miyazaki, Hajime; Nishizawa, Kyojun; Tsumaki, Hidetoshi (Dep. Chem., Univ. Tsukuba, Ibaraki, 300-31, Japan). Photochemistry and Photobiology, 30(1, Chemi- Bioenergized Processes), 81-7 (English) 1979. CODEN: PHCBAP. ISSN: 0031-8655.

AB Under the reaction conditions studied, dye-sensitized photooxygenation of the title ylides proceeded via singlet O. Photooxygenation of oxosulfonium and pyridinium methylides gave DMSO and pyridine as the major cleavage products. These results suggest that 1,2-dioxetane-type intermediates are not significant in these reactions. Oxygenation reactions in the presence of Ph<sub>2</sub>S gave Ph<sub>2</sub>SO. A new type of intermediate that can monooxygenate the substrate is suggested. **Photosensitized** oxygenations of corresponding diazo compds. were also studied.

IT **7039-28-3P**  
 (prepn. and **photosensitized** oxygenation of)

RN 7039-28-3 HCA

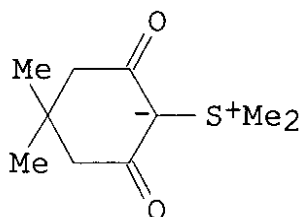
CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



- CC 22-5 (Physical Organic Chemistry)  
 ST **photosensitized** oxygenation sulfur pyridinium ylide;  
 diazomalonate **photosensitized** oxygenation; diazodimedone  
**photosensitized** oxygenation  
 IT 1807-68-7 3469-17-8 6773-29-1  
 (photosensitized oxygenation of)  
 IT 1291-37-8 17870-68-7 24420-62-0  
 (photosensitized oxygenation of, in presence and  
 absence of di-Ph sulfide)  
 IT 5633-34-1P 7039-28-3P 32618-73-8P  
 (prepn. and **photosensitized** oxygenation of)

L28 ANSWER 16 OF 20 HCA COPYRIGHT 2004 ACS on STN  
 89:179563 Synthesis and properties of 2-diazo-1,3-dicarbonyl compounds.  
 IV. Photolysis of 2-diazo-1,3-diketones in dialkyl sulfides.  
 Nikolaev, V. A.; French, J.; Korobitsyna, I. K. (Leningr. Gos.  
 Univ., Leningrad, USSR). Zhurnal Organicheskoi Khimii, 14(7),  
 1433-41 (Russian) 1978. CODEN: ZORKAE. ISSN: 0514-7492. OTHER  
 SOURCES: CASREACT 89:179563.

GI



III

- AB Photolysis of  $\text{RCOC}(:\text{N}_2)\text{COR}$  [I;  $\text{R}_2 = \text{CH}_2\text{CH}_2$ ,  $(\text{CH}_2)_3$ ,  $\text{CH}_2\text{CMe}_2\text{CH}_2$  (II)]  
 in  $\text{R}_1\text{S}$  ( $\text{R}_1 = \text{Me}$ , Et) afforded 90-5% oligomeric acylketenes (via  
 Wolff rearrangement), which was cleaved with  $\text{HX}$  ( $\text{X} = \text{OH}$ , OMe, OEt,  
 $\text{NEt}_2$ ,  $\text{NHPh}$ ) to give the correspondence  $\text{RCOCHRCOX}$  in 60-76% yield; II  
 and  $\text{PhNH}_2$  gave  $\text{PhNHCR}:\text{CRCONHPh}$  product. Irradn. of ylide III gave  
 the oligomer from II. Analogous treatment of I ( $\text{R} = \text{Me}$ , Et,  $\text{Me}_2\text{CH}$ )  
 gave  $(\text{RCO})_2\text{C-S}^+\text{Me}_2$  (IV) and product: via Wolff rearrangement. IV

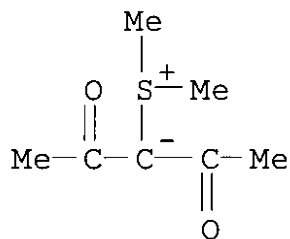
yield decreased in a state order R. I (R = Me<sub>3</sub>C) gave 53% Me<sub>3</sub>CCOC(CMe<sub>3</sub>):CO (V) and 32% 2,2-dimethyl-4-pivaloylcyclobutanone (VI) under similar conditions and of V, VI and Me<sub>3</sub>CCOCH<sub>2</sub>CMe<sub>2</sub>CO<sub>2</sub>H and Et<sub>2</sub>O or aq. THF.

IT 7039-28-3P 67832-65-9P 67832-66-0P

(prepn. of)

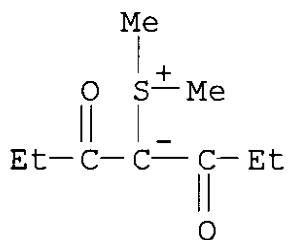
RN 7039-28-3 HCA

CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



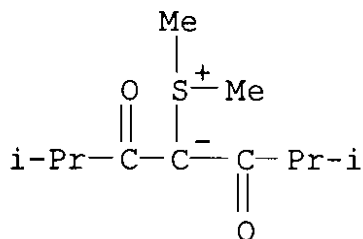
RN 67832-65-9 HCA

CN Sulfonium, dimethyl-, 2-oxo-1-(1-oxopropyl)butylide (9CI) (CA INDEX NAME)



RN 67832-66-0 HCA

CN Sulfonium, dimethyl-, 3-methyl-1-(2-methyl-1-oxopropyl)-2-oxobutylide (9CI) (CA INDEX NAME)



CC 24-1 (Alicyclic Compounds)

Section cross-reference(s): 23

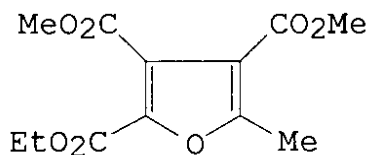
IT Ketones, **reactions**

(diazo di-, photolysis of, in dialkyl sulfides)

IT 7039-28-3P 22704-18-3P 22773-08-6P 31380-45-7P  
 50882-16-1P 60585-44-6P 67391-55-3P 67391-56-4P 67391-57-5P  
 67398-43-0P 67398-44-1P 67398-45-2P 67398-46-3P  
 67832-65-9P 67832-66-0P 67832-67-1P  
 67832-68-2P 67832-69-3P  
 (prepn. of)

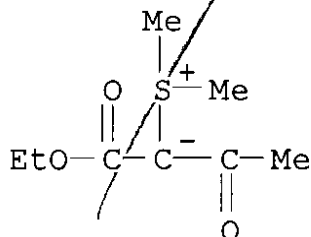
L28 ANSWER 17 OF 20 HCA COPYRIGHT/2004 ACS on STN  
 87:84743 Synthesis of furan derivatives. **Synthesis** of  
 furanpolycarboxylic acid. Saikachi, Haruo; Kitagawa,  
 Tokujiro (Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, Japan).  
 Chemical & Pharmaceutical Bulletin, 25(4), 809-11 (English) 1977.  
 CODEN: CPBTAL. ISSN: 0009-2363. OTHER SOURCES: CASREACT 87:84743.

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AB The furantricarboxylate I was prepd. by cyclocondensation of  
 EtO<sub>2</sub>CC(COMe):SMe<sub>2</sub> with MeO<sub>2</sub>CC.tplbond.CCO<sub>2</sub>Me, presumably via the 1,3  
 MeCO shift of the ylide MeCOC(S+Me<sub>2</sub>)(CO<sub>2</sub>Et)C(CO<sub>2</sub>Me):C-CO<sub>2</sub>Me to give  
 Me<sub>2</sub>S+C(CO<sub>2</sub>Et):C(CO<sub>2</sub>Me)C(CO<sub>2</sub>Me):CMeO- and cyclization of the latter.

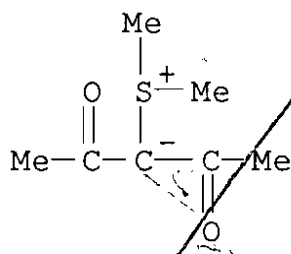
IT 7039-34-1  
 (cyclocondensation of, with dimethyl acetylenedicarboxylate)  
 RN 7039-34-1 HCA  
 CN Sulfonium, dimethyl-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA  
 INDEX NAME)



CC 27-6 (Heterocyclic Compounds (One Hetero Atom))  
 IT 7039-34-1  
 (cyclocondensation of, with dimethyl acetylenedicarboxylate)

L28 ANSWER 18 OF 20 HCA COPYRIGHT 2004 ACS on STN

- 78:123954 Synthetic aspects of carbene reactions. I. Reactions of alkoxy carbonyl carbenes with molecules bearing hetero atoms. Migita, Toshihiko; Ando, Wataru (Fac. Eng., Gunma Univ., Maebashi, Japan). Kenkyu Hokoku - Asahi Garasu Kogyo Gijutsu Shoreikai, 20, 317-33 (Japanese) 1972. CODEN: AGKGAA. ISSN: 0365-2599.
- AB Direct or benzophenone-sensitized photolysis and Cu salt-catalyzed decompn. of  $N_2C(CO_2Me)_2$  and  $N_2CHCO_2Et$  were studied in the presence of aliph. hetero compds. i.e. alkyl or allyl sulfides, ethers, halides, and alcs. The Cu salt-catalyzed reaction gave stable ylides and occurred selectively on the hetero atoms of substrates bearing both hetero atoms and ethylenic double bonds; **photosensitization** gave insertion and cycloaddn. products with high selectivities. Reaction of alkoxy carbonyl carbenes with allyl alcs. gave bicyclic lactones.
- IT 7039-28-3P  
(prepn. of)
- RN 7039-28-3 HCA
- CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



CC 23-17 (Aliphatic Compounds)

| IT | 1283-64-3P  | 5617-63-0P  | 7039-28-3P  | 13353-12-3P |             |
|----|-------------|-------------|-------------|-------------|-------------|
|    | 13353-14-5P | 13353-17-8P | 15143-62-1P | 15224-07-4P | 16860-52-9P |
|    | 17870-68-7P | 22874-89-1P | 22874-92-6P | 24171-94-6P | 24171-95-7P |
|    | 24171-96-8P | 24171-97-9P | 24171-98-0P | 24171-99-1P | 24172-00-7P |
|    | 24172-01-8P | 24172-02-9P | 24212-88-2P | 24308-25-6P | 24420-55-1P |
|    | 24420-56-2P | 24420-58-4P | 24420-59-5P | 24420-60-8P | 24420-61-9P |
|    | 29119-67-3P | 29119-68-4P | 29123-96-4P | 29123-97-5P | 29123-98-6P |
|    | 29123-99-7P | 29124-03-6P | 29124-04-7P | 29124-05-8P | 32150-12-2P |
|    | 32150-13-3P | 34281-98-6P | 34281-99-7P | 34282-00-3P | 35589-61-8P |
|    | 35589-62-9P | 35589-63-0P | 35620-08-7P | 35620-09-8P | 35620-10-1P |
|    | 35620-12-3P | 35620-14-5P | 35621-67-1P | 35621-69-3P | 35621-70-6P |
|    | 35621-71-7P | 35621-73-9P | 38134-18-8P | 40426-66-2P | 40426-67-3P |
|    | 40426-68-4P | 40426-69-5P | 40426-70-8P | 40426-75-3P | 40426-76-4P |
|    | 40426-77-5P | 40426-78-6P | 40426-79-7P | 40426-80-0P | 40426-81-1P |
|    | 40426-82-2P | 40426-83-3P | 40426-84-4P | 40426-85-5P | 40426-87-7P |
|    | 40426-88-8P | 40426-89-9P | 40426-92-4P | 40426-93-5P | 40426-95-7P |
|    | 40426-96-8P | 40426-97-9P | 40426-98-0P | 40426-99-1P | 40427-00-7P |
|    | 40427-14-3P | 40427-18-7P | 40427-22-3P | 40427-26-7P | 40427-28-9P |
|    | 40513-77-7P | 40864-40-2P |             |             |             |

(prepn. of)  
 IT 119-61-9, uses and miscellaneous  
 (sensitizer, for photolysis of diazoacetates  
 and diazomalonates)

L28 ANSWER 19 OF 20 HCA COPYRIGHT 2004 ACS on STN

77:33724 Reactions of dimethyl diazomalonate with divalent sulfides.  
 Ando, Wataru; Yagihara, Tomio; Tozune, Shigeru; Imai, Isamu; Suzuki,  
 Junji; Toyama, Tadao; Nakaido, Setuko; Migita, Toshihiko (Dep.  
 Chem., Gunma Univ., Kiryu, Japan). Journal of Organic Chemistry,  
 37(11), 1721-7 (English) 1972. CODEN: JOCEAH. ISSN: 0022-3263.  
 OTHER SOURCES: CASREACT 77:33724.

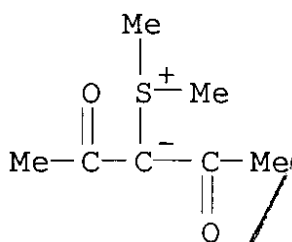
AB Bis(carbomethoxy)-carbene, generated photochem. from dimethyl  
 diazomalonate, reacts with alkyl and aryl sulfides to form stable  
 sulfonium bis-(carbomethoxy) methylides. Reaction of the carbene  
 with alkyl disulfides forms alkylthiomalonate as the major product  
 instead of the sulfonium ylides. Triplet carbene, generated from  
 benzophenone photosensitized decompn. of the  
 diazomalonate, also reacts with Me<sub>2</sub>S to produce the sulfonium ylide.  
 This ylide formation involves the fast intersystem crossing from the  
 triplet to the singlet carbene in the presence of Me<sub>2</sub>S. Copper salt  
 catalyzed thermal decompn. of diazomalonate in alkyl or aryl  
 sulfides produces sulfonium ylides in high yields.

IT 7039-28-3P

(prepn. of)

RN 7039-28-3 HCA

CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)

IT 7039-28-3P 14070-66-7P 17870-68-7P 24308-25-6P  
 24420-52-8P 24420-53-9P 24420-55-1P 24420-56-2P 24420-57-3P  
 24420-58-4P 24420-59-5P 24420-60-8P 24420-61-9P 24420-62-0P  
 24420-63-1P 33781-29-2P 34281-98-6P 34281-99-7P 34282-00-3P  
 34282-07-0P 34282-11-6P 34282-12-7P 34282-14-9P 34282-15-0P  
 34282-16-1P 34282-18-3P 34282-19-4P 34282-20-7P 34297-79-5P  
 (prepn. of)

L28 ANSWER 20 OF 20 HCA COPYRIGHT 2004 ACS on STN

77:4699 Synthesis and acid-base and tautomeric



equilibriums of some onium derivatives of acetoacetic ester.

Kalnina, S.; Neilands, O. (Rizh. Politekh. Inst., Riga, USSR).

Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija (1), 43-8 (Russian) 1972. CODEN: LZAKAM. ISSN: 0002-3248.

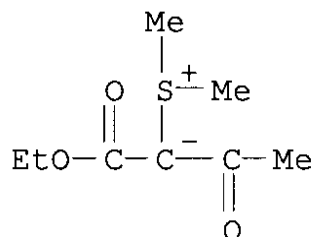
AB By refluxing the iodonium salt,  $\text{MeCO}(\text{EtO}_2\text{C})\text{C-I}+\text{C}_6\text{H}_3\text{R}_2-3,4$  (I, R = H, Me), 2 min with quinoline, isoquinoline, or  $\text{Me}_2\text{S}$  in the presence of Cu acetylacetonate in  $\text{C}_6\text{H}_6$  the corresponding inner salts of (1-carbethoxy-2-oxopropanyl)quinolinium (II), -isoquinolinium (III), and -dimethylsulfonium (IV) hydroxide were prepd. in 70-94% yield. The salts easily absorbed moisture and formed hydrates. The protonated forms of II, III, IV, and V exist as tautomeric mixts. of cis-cis-enol and ketone. The equil. consts. (KT) in aq. media were detd. (compd. and KT in  $\text{H}_2\text{O}$ , 50, and 85% EtOH given): II, 0.79, 0.82, 1.0; III, 0.12, 0.20, 0.32; IV, 1.13, 1.32, 1.56; V, 0.76, 1.56, 1.78. The pK of the protonated compds. were also detd.

IT 7039-34-1P

(prepn. and tautomerism of)

RN 7039-34-1 HCA

CN Sulfonium, dimethyl-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA INDEX NAME)



CC 22-8 (Physical Organic Chemistry)

IT 7039-34-1P 37070-74-9P 37070-75-0P  
(prepn. and tautomerism of)

=> d 129 1-82 ti

L29 ANSWER 1 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI A new reaction of sulfur ylides. Imination of dimethylsulfonium ketoylides with tosyl isocyanate

L29 ANSWER 2 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI Sulfur ylides. 12. Optically active keto stabilized sulfur ylide obtained from L-proline: synthesis and study

L29 ANSWER 3 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI Highly fluorinated sulfonium enolates

- L29 ANSWER 4 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI 3-Unsubstituted 1,5-Diaryl-2,4-pentanediones and  
-4-Methoxy-2-pentanones: Synthesis via Corresponding 3-Hydroxy  
Ketones Generated from 2-Isoxazolines
- L29 ANSWER 5 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Structural and configurational isomerism of cations of O- and  
C-sulfo derivatives of 1,3-keto enols. Unusual mechanism of  
topomerization of cyclic sulfuranes
- L29 ANSWER 6 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis of 1,4-oxathiocines and thiopyrans by the reaction of  
2-amino-4,5-dihydro-3-thiophenecarbonitriles with ethyl  
diazoacetoacetate
- L29 ANSWER 7 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI A general route to 3-unsubstituted 1,5-diaryl-2,4-pentanediones and  
-4-methoxy-2-pentanones
- L29 ANSWER 8 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Chemistry and structure of thiophenium S,C-ylides
- L29 ANSWER 9 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Study of Anh's theory for  $\alpha$ -thiolated cyclohexanones
- L29 ANSWER 10 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions with betaines. XXV. The chemistry of betaines from  
dihetero alkanes
- L29 ANSWER 11 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Sulfur ylides. 5. Reactions of phthalimido-containing  
keto-stabilized sulfonium ylides
- L29 ANSWER 12 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Benzo[b]thiophenium sulfur-carbon ylides: preparation, structure and  
comparison with thiophenium analog
- L29 ANSWER 13 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Crystal and molecular structures of two sulfonium ylides: the  
influence of secondary sulfur-oxygen interactions on conformation  
and packing of molecules
- L29 ANSWER 14 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Convenient synthesis of stable sulfur ylides by reaction of active  
methylene compounds with Corey-Kim reagent
- L29 ANSWER 15 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Transylidation of some stabilized bismuthonium ylides

- L29 ANSWER 16 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. XI. Facile preparation of silyloxydienes from stable sulfur ylides
- L29 ANSWER 17 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. X. Reactions of carbonyl-stabilized sulfonium ylides with acetyl chloride
- L29 ANSWER 18 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Convenient synthesis of sulfur ylides by reaction of active methylene compounds with Corey-Kim reagent
- L29 ANSWER 19 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI A nuclear magnetic resonance and x-ray diffraction study on the metal salt complexes of dicarbonyl-stabilized ammonium and sulfonium ylides
- L29 ANSWER 20 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis of 1,3-dicarbonyl compounds by the oxidation of 3-hydroxycarbonyl compounds with Corey-Kim reagent
- L29 ANSWER 21 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis of stable sulfonium ylides from sulfoxides and dimethyl acetylenedicarboxylate
- L29 ANSWER 22 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Generation and dienophilic reactivity of  $\alpha$ -oxo selenoaldehydes and ketones
- L29 ANSWER 23 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Different reactivity of N- and S-methylides toward electrophilic reagents
- L29 ANSWER 24 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions with betaines. XXII. On S-betaines and their relationship to the stable S-ylides
- L29 ANSWER 25 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Inhibition of cathepsin D by substrate analogs containing statine and by analogs of pepstatin
- L29 ANSWER 26 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions with betaines. XX. Synthesis of stable S-ylides
- L29 ANSWER 27 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Highly stereoselective reduction of  $\beta$ -oxosulfonium salts - synthesis of trans epoxides

- L29 ANSWER 28 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Vicinal polycarbonyl compounds
- L29 ANSWER 29 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reaction of perfluoroisobutylene with sulfur ylides
- L29 ANSWER 30 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Oxidation of statine-containing peptides to ketone analogs via novel peptide sulfonium ylides
- L29 ANSWER 31 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI The effects of different copper (and some other) catalysts on the conversion of triphenyl- and tetraphenyldiazocyclopentadienes and of some phenyliodonium  $\alpha\alpha'$ -dicarbonylides into arsonium and other ylides
- L29 ANSWER 32 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Electronic transitions in UV spectra of phosphorus and sulfur ylides stabilized by carbonyl groups
- L29 ANSWER 33 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reaction of oxosulfonium phenacylides with arylglyoxals. Effects of bis(acetylacetonato)copper(II)
- L29 ANSWER 34 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI  $\beta$ -Lactam compounds and their pharmaceutical use
- L29 ANSWER 35 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. VIII. The reactions of 1,3-oxazin-4-one derivatives
- L29 ANSWER 36 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. IX. Reaction of dimethylsulfonium acetylcarbamoylemethylide with isoquinoline 2-oxide
- L29 ANSWER 37 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Quantum chemical study of sulfonium ylides: structure, charge distribution and dipole moments
- L29 ANSWER 38 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. VII. The reaction of dimethylsulfonium acetylcarbamoylemethylide with quinoline 1-oxide
- L29 ANSWER 39 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Iodonium derivatives of  $\beta$ -diketones. XVIII. Synthesis and properties of phenyliodonium betaine of benzoyl trifluoroacetone

- L29 ANSWER 40 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stabilization and spectral properties of sulfoxonium ylides
- L29 ANSWER 41 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Addition reactions of heterocumulenes. IV. Reactions of diketene and diphenylketene with N-aryl-S,S-dimethylsulfilimines
- L29 ANSWER 42 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. VI. The reaction of dimethylsulfonium acetylmethoxycarbonylmethylide and dimethylsulfonium diacetylmethylide with isoquinoline 2-oxide
- L29 ANSWER 43 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Conformational isomerism and spectral properties of some phosphonium and sulfoxonium ylides stabilized by a carbonyl group
- L29 ANSWER 44 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Electrophilic sulfides(II) as a novel catalyst. V. Structure, nucleophilicity, and steric compression of stabilized sulfur ylides as observed by carbon-13-NMR spectroscopy
- L29 ANSWER 45 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI 2-Equivalent coupler
- L29 ANSWER 46 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI A new synthetic approach to esters of  $\beta$ -keto thiocarboxylic S-acids
- L29 ANSWER 47 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Ion radicals. 39. Reactions of 10-methyl- and 10-phenylphenothiazine cation radical perchlorates with ketones
- L29 ANSWER 48 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. V. Syntheses of  $\alpha$ -acylfuran derivatives by thermal and photochemical reaction of allylides
- L29 ANSWER 49 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Syntheses with carbanions derived from carbonyl-stabilized sulfonium ylides: a novel route to furan-3(2H)-ones
- L29 ANSWER 50 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dialkylaminosuccinimidosulfonium compounds. Part 2. Sulfur ylides from alkyl(aryl)dialkylaminosuccinimidosulfonium chlorides
- L29 ANSWER 51 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides. IV. Reaction of dimethylsulfonium acetylmethoxycarbonylmethylide and dimethylsulfonium diacetylmethylide with quinoline 1-oxide

- L29 ANSWER 52 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Cyano group-containing sulfur ylides
- L29 ANSWER 53 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Ion radicals. XXXV. Reactions of thianthrene and phenoxathiin cation radicals with ketones. Formation and reactions of  $\beta$ -ketosulfonium perchlorates and ylides
- L29 ANSWER 54 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Rearrangements of azidoquinones. XVI. Thermal and photolytic rearrangements of 2,5-diazido-1,4-quinones. Synthesis and chemistry of cyanoketenes
- L29 ANSWER 55 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Syntheses with carbanions derived from carbonyl-stabilized ylides. Products from reactions of lithio derivatives of dimethylsulfonium diacetyl methylide
- L29 ANSWER 56 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Ion radicals. XXXI. Reaction of thianthrene cation radical perchlorate with ketones. Formation of  $\beta$ -ketoalkysulfonium perchlorates and ylides
- L29 ANSWER 57 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis and reactions of chiral sulfonium ylides
- L29 ANSWER 58 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic and cyclic sulfides
- L29 ANSWER 59 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Preparation of stable sulfoxonium ylides (sulfurane S-oxides) containing an amidino group
- L29 ANSWER 60 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions of copper carbenoids with sulfoxides
- L29 ANSWER 61 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dimethylsulfonium 1-[(alkoxycarbonyl)carbonyl]phenacylides and their derivatives
- L29 ANSWER 62 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dimethylsulfonium 1-(phenylcarbamoyl)-2-oxo-3,4-diphenyl-3-butenyl-1-ylides
- L29 ANSWER 63 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dimethylsulfonium 1-(alkoxycarbonyl)-4-oxo-5,6-diphenyl-1,5-hexadienyl-

## 3-ylides

- L29 ANSWER 64 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Carbenes. IV. Dimethylsulfoniomethanides from diazo compounds by photochemical reaction
- L29 ANSWER 65 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Ylide exchange reaction of sulfilimine
- L29 ANSWER 66 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Fungicidal  $\alpha$ -substituted sulfonium ylides
- L29 ANSWER 67 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reaction of sulfonium ylides with diphenylcyclopropenone. New synthesis of 2-pyrones
- L29 ANSWER 68 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Furans from sulfonium diacylmethylides and acetylenes
- L29 ANSWER 69 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions of sulfur ylides with cyclic carboxyl compounds and isocyanates
- L29 ANSWER 70 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis and reactions of sulfonium diacylmethylide having active hydrogen
- L29 ANSWER 71 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dimethylsulfoxonium 1-penten-4-one 3-ylides
- L29 ANSWER 72 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Rearrangements and reactions of stable sulfonium ylids from acetylenic sulfonium salts
- L29 ANSWER 73 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Isothiazole chemistry. IX. Selectivity in carbanion attack on N-ethyl-3-isothiazolone
- L29 ANSWER 74 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reactions of diphenylsulfonium phenacylide
- L29 ANSWER 75 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Dimethyl sulfoxonium hydroxide, inner salts
- L29 ANSWER 76 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Synthesis of stable sulfonium and sulfoxonium ylides via thermal and photolytic decomposition of diazo carbonyl compounds in sulfides and sulfoxides

- L29 ANSWER 77 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Reaction of sulfonium ylides with sulfonyl chlorides
- L29 ANSWER 78 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Structure and reactions of certain sulfur ylides
- L29 ANSWER 79 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Ethyl (dimethylsulfuranylidene)acetate. IV. Miscellaneous reactions
- L29 ANSWER 80 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Carbodiimide-sulfoxide reactions. VII. Synthesis of stabilized sulfonium ylides
- L29 ANSWER 81 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Preparative and structural studies on certain sulfurylides
- L29 ANSWER 82 OF 82 HCA COPYRIGHT 2004 ACS on STN  
TI Stable sulfur ylides